The Brunnsviken Brief Quality of Life Scale to Assess Quality of Life in Older Adults

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Abstract

Quality of life is influenced by physical and psychological health, personal beliefs, and social and environmental relationships. QoL scales for aging adults have primarily focused on objective factors, excluding subjective factors that support self-perception. These subjective qualities are inherent in social and cognitive processes necessary for healthy aging and overall well-being. A quantitative study aimed to analyze the effects of art therapy in aging adults utilized the Brunnsviken Brief Quality of life scale (BBQ) pre, mid, and post 32-week study. Data analysis used a regression that showed significance in the Importance of Learning and Leisure, demonstrating that participation in art therapy increased the importance of these life areas in QoL.

Keywords: art therapy, quality of life, life domains, Brunnsviken Brief Quality of Life Scale, leisure, learning

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The broadly used term *quality of life* encompasses multiple aspects of what it means for individuals to age well. The World Health Organization (2019) defines quality of life (QoL) as the perception of your position within context, culture, and value systems. They relate goals, expectations, standards, and concerns and are influenced by physical and psychological health, personal beliefs, and social and environmental relationships. Art therapy literature explores aspects of quality of life for aging adults, including reduction of depressive symptomology (Ilali, 2018); increased confidence, emotional expression and support, motivation, and interpersonal interactions, enjoyment in the creative process (Vaartio-Rajalin et al., 2021); improved cognitive performance (Alders Pike, 2013); development of artistic identity, purposefulness, and connection to others (Stephenson, 2013); and empowerment and recognition (Houpt et al., 2016). QoL scales for aging adults have primarily focused on housing, financial status, and health and previously excluded subjective factors such as participation in leisure and learning activities that support self-perception (Lindner et al., 2016). Based on the literature reviewed, these subjective qualities are central aspects in reflection and discussion on important factors that impact overall well-being. Broader subjective domains identified by Linder et al. (2016)—leisure time, life review, creative, learning, friends and friendships, and myself as a person—allow for an understanding of individual perspectives on the valuable aspects of daily life.

For aging adults, creativity can strengthen problem-solving skills aiding in sustaining adaptive competence, deepening self-understanding, and promoting meaningful involvements. Creativity provides aging adults with a sense of accomplishment and purpose, encouraging a sense of contribution and future planning, connection with others, and leaving a part of

themselves for prosperity. Aging adults who engage in creative activities endure illness, aging, and death with more tolerance and ease (Vaartio-Rajalin et al., 2021).

Furthermore, participation in leisure activities, defined as activities performed for their own sake, not for their consequences, tends to decline with advancing age, which may be exacerbated by illness, psychological distress, cultural-environmental changes, and other constraints (Nimrod & Shrira, 2014). Leisure activities help identify and redefine purpose by expressing personal abilities, gaining control over the environment, and identifying important aspects of life (Stephenson, 2013). As people age, it becomes increasingly important to engage in leisure activities, especially those that are stimulating, challenging, and flexible (Nimrod & Shrira, 2014), which helps preserve their identity, contribute to their sense of integrity and allow for opportunities for self-renewal (Ilali et al., 2018). Through engagement in leisure activities, aging adults enhance their sense of self, learn new skills, and develop relationships with peers.

Moreover, aging adults have strong motivation to learn despite slower cognitive processing and an increased need for more practice, with outcomes such as self-fulfillment and pleasure (Boulton-Lewis, 2010). Mackowicz and Wnek-Gozdek (2016) reported that engaging in educational activities allows individuals to maintain their intellectual capacity as they age, improves self-esteem and personal development, provides opportunities to adapt to an ever-changing reality, supports social ties, and actively participates in social experiences. The aims of education for aging adults are to maintain self-sufficiency and independence while supporting the development of new interests and maximizing leisure time (Mackowicz & Wnek-Gozdek, 2016), leading to feelings of mastery and increased empowerment (Cohen, 2006).

Methods

Research Design and Ethical Review

An art therapy program was designed using a Person and QoL-centered approach, offering individual and group art therapy sessions with client-driven foci. These approaches in art therapy focused on the whole person and aimed to foster wellness and promote social connectedness in older adults (Houpt et al., 2016). This IRB-approved study employed a pre, mid, and post-study Brunnsviken Brief Quality of Life Scale (BBQ) to identify if participation in art therapy treatment as usual increased subjective QoL domains. Art therapy sessions included individual and group sessions at two facilities in a large Midwestern city. The first site is a non-medical adult day program for guests and family caregivers. The center focuses on safety and opportunities to enhance abilities, likes, and desires for individuals with mental and physical challenges requiring supportive care. The second site is the long-term care center in a skilled nursing facility that focuses on maintaining independence and autonomy for elders. The individual sessions were client-driven in topic and material choice, and groups were open format with a therapist-determined theme or art-making task. Allowing for choice in materials and task supports empowerment and self-efficacy and align with Person and QoL-centered approaches (Kapitan, 2014).

Participants

This study was part of a more extensive art therapy internship that served 50 participants from two non-clinical sites. The art therapy services were available to all guests at the adult day center and the elders in long-term housing. For the study, convenience sampling was used from the individuals currently receiving art therapy services. First, the participant was provided the

recruitment materials and the Informed Consent to gauge interest. If interested, the intern and primary investigator met with the Legally Authorized Representative (LAR) to review the Informed Consent and recruitment materials. Third, the participant and their LAR signed the Informed Consent documents.

Of the 50 individuals, 17 or 34% of the participants from the two facilities enrolled in the study portion of the internship. Two participants (one male and one female) dropped out of the study after enrollment, noting a lack of interest. One female participant dropped out after the pre-assessment, and one male participant dropped out after the mid-assessment due to increasing challenges completing the BBQ. Fourteen participants (13 female and one male) completed the study with a retention rate of 82%. The age of the participants ranged from 65-to 100 years old.

Cognitive impairments were not assessed beyond the ability to answer the BBQ, and no screening tools to evaluate for dementia were used. Appropriateness for participation was determined by the participant and their LAR based on the Informed Consent, study materials, and meeting with the research team. Mobility, vision, and sensory limitations were not documented in the data collection.

Measures

The BBQ is a valid and reliable, brief, self-rating scale for QoL concordant with overall life satisfaction. It is “sensitive to difference between clinical and non-clinical groups, with a psychometric performance on par with longer, more complex QoL instruments” (Lindner et al., 2016, p. 189). The BBQ scores did not differ between genders or ages in the validation study, suggesting that the scale is not biased towards any age or sex group.

This measure takes an average of 10 minutes to administer. Participants completed the screening independently or with requested assistance. Participants chose from 5-point multiple choice options from “do not agree at all” to “agree completely” for the Satisfaction and Importance of each of the six life domains (leisure time, view of life, creative, learning, friends and friendships, and myself as a person).

Procedures

This 32-week study looked at the impact of art therapy as usual on QoL. The study did not evaluate a type of intervention but instead assessed the overall effect of the art therapy program within two aging facilities. It was separated into 16-week sections with a four-week break between the two sections. The data were composed of the BBQ administered at pre, mid, and post-study points. Before administration (pre, mid, and post), the researcher read the informed consent aloud and assessed understanding per the study’s guidelines.

The program offered individual and group therapy, and all services were voluntary. Individual art therapy was defined as one-on-one with the researcher. Group art therapy was defined as two or more participants engaging in a structured group directive with the researcher. Client-generated directives and materials were used in individual and group sessions. The directives varied per researcher and site. Services were offered three days a week, ranging from 30 to 60 minutes, with approximately 12 hours of services per week; attendance and participation were at the participant’s discretion. The study did not include measures of participation.

Validity/Credibility

The BBQ scale uniquely assesses the subjective quality of life domains focusing on the importance and satisfaction in creative activities, aligning it to the use of art therapy for wellness and QoL. Additionally, the

> … BBQ displays high concurrent and convergent validity, high internal and test-retest reliability, good ability to differentiate between clinical and healthy groups, and is sensitive to change, making it suitable as a screening and outcome measure in psychological and psychiatric research and practice. (p. 193)

Data Analysis

A regression analysis – used to predict the relationship between the dependent (QoL) and independent variable (art therapy) – was completed to identify if significance in the life areas was found due to participating in art therapy. Missing values were removed from individuals who dropped out of the study, identification of gender was removed, data subsets included in pre, mid, and post-study fields were converted to numerical values, and recalculation of overall scores was performed to the raw data before the analysis. The data were imported into SAS 9.4 for statistical analysis following these modifications. Additional data modifications in SAS included the calculation of within-question total scores as the product of the corresponding "Importance (I)" and "Satisfactory (S)" scores.

For each of the six total scores, "I" and "S" sub-scores, and total score, a regression was performed on evaluations at the pre, mid, and post-study time points and represented by values 1, 2, and 3. The regression models the relationship below.

Score = intercept + slope*time +/- some error

The regression model calculated the line of best fit between the score and time by estimating values for the intercept and slope. The probability of this hypothesis was calculated to find the probability or *p*-value. A *p*-value of less than .10 would show significance in the score change from pre to mid to post-evaluations. The direction of the slope—positive (increase) or negative (decrease)—was assessed to determine how the score changed from each evaluation.

Results

Table 1 summarizes the results of the regressions from the overall scores and each life domain. Column 1 indicates the domain being assessed, and column 2 lists the *p*-value – the probability that there is no relationship between the score and the pre, mid, and post timepoints. Scores above .10 confirmed the hypothesis that the regression showed no connection between the score and the domain. When that probability was .10 or less, column 3 notes the direction—whether the relationship is increasing or decreasing over time (+/-). P-values less than .10 reject the hypothesis that there is no relationship between the score and time points. Scores that show a positive direction demonstrated that improvements in scores (.90 or more) were correlated to participation in art therapy. Column 4 briefly explained the result. The regression results showed that Significance was found in the Importance factor of Leisure and Learning. These data indicate that participating in art therapy positively impacted the importance of leisure and learning as they connect to QoL.

It is imperative to note that the results above are based on a small subset of data. The study did not delineate a minimal amount of required attendance to participate in the study, nor was it compared to the BBQ scores. Additionally, the raw data from one site showed that most of

the participants selected “agree completely” for all domain areas, which could have affected the results of the data analysis.

Discussion

The impact of the treatment as usual art therapy program focused on wellness and QoL in two facilities was evaluated based on the subjective quality of life domains using the BBQ. As a result of this study, significance was found in the Importance of Leisure and Learning. Art-making provided the participants with stimulating, challenging, and flexible leisure activities necessary for healthy aging (Nimrod & Shrira, 2014). Art-making allowed them to explore personal abilities and identify significant aspects of their lives (Stephenson, 2013). Participants utilized traditional art materials, such as paint, pastels, and pencils to learn painting and drawing techniques as a part of their individual and group sessions. The range of materials integrated the life domains of creativity, leisure, and learning within the supportive art therapy space.

Jane (Figure 1) painted memories and engaged in storytelling in individual sessions. Jane met with the researcher two times per week during the study. Initially, she started painting from photographs, including her daughter’s favorite dog and a family portrait. Then, she painted from memory, documenting her career and family vacations. In later sessions, she created paintings from imagination, including a young boy next to a creek in a field of daisies. During these sessions of art-making and storytelling, she learned painting techniques like stippling, dry brushing, and dabbing.

Canvas at the Cottage was a weekly painting group. The researcher planned paintings based on the participants’ preferences. These groups included an introduction to materials,

techniques, and opportunities to share memories and socialize. Figure 2 was created during the winter holiday season to demonstrate mastery and creative self-expression.

Since this study was aligned with internships, it provided an opportunity to understand the type of media. While this data is anecdotal, it is valuable in creating a holistic understanding of the impact of art therapy (de Gracia Blanco et al., 2004). The wide range of art media – 2-dimensional and 3-dimensional materials – added to the learning opportunities by incorporating self-fulfillment and pleasure (Boulton-Lewis, 2010). Using 2-dimensional and 3-dimensional materials offered a broad range of options for mastery and empowerment aligning with participants' interests (Cohen, 2006).

For example, three-dimensional materials included embroidery and cross-stitch, creating tiles and shell mosaics, making jewelry, and building birdhouses, demonstrating various learning experiences and cognitive processes, including planning, sequencing, prediction, and problem-solving skills. Jewelry design was used in both individual and group sessions. Participants incorporated plastic, wood, and ceramic beads to create wearable art supporting self-expression and self-esteem.

Coupled with art as a creative expression, participants were encouraged to explore directives that fostered insight-oriented processes, supported collaboration, and reduced stress that may be exacerbated by illness, psychological distress, cultural-environmental changes, and other constraints (Nimrod & Shrira, 2014). The directives elicited memory-making, reminiscing, self-esteem, and stress management themes. These themes connected to the life domains of life review and myself as a person demonstrating that purposefulness, contribution, and opportunities for self-renewal enhance QoL (Ilali et al., 2018).

James hesitantly joined the study, stating that it was to continue to spend time with the researchers and help them with their projects. He began with simple inkblot paintings where he selected colors and then folded the paper (see Figure 3). After several weeks and gaining a sense of mastery, he began to paint based on his interests, like fish and cars. As his confidence increased, he painted memories like his grandson playing baseball. In later sessions, he painted images from his imagination, including animals, nature, and boats.

It is the opinion of these researchers that art therapy has the potential to increase all domains through a variety of service options targeting an exploration of personal abilities and essential aspects of life. Continued participation in individual and group art therapy suggested that the participants experienced benefits from social connectedness and shared experiences that are foundational in developing new friendships (Kontos et al., 2019). From the broader program, we found that by engaging in creative endeavors, aging adults integrate broader life domains, including meaningful leisure activities, using creativity in life review and deepening a sense of self, learning new skills, and developing strong connections and relationships with others. The Person and QoL- centered approach supported autonomy in art therapy, and the emerging directives and themes supported the importance of subjective life domains.

Practical Implications

This study demonstrates that art therapy as usual can enhance QoL, specifically using art-making and creativity to enhance leisure and learning in older adults. Focusing on QoL, art therapy services in non-clinical treatment centers supports aging well. Additionally, using the BBQ as a self-rating tool provides invaluable feedback on individual client preferences and can

potentially impact future programming. Further, using non-pathologizing rating tools aligns with non-clinical treatment facilities and expands art therapy beyond the clinical realm.

Limitations

As a preliminary study, this serves as an understanding of how art therapy as usual impacts QoL for older adults using a self-rating tool. A significant limitation of this study was using art therapy as usual rather than a manualized or structured art therapy protocol. In addition to variability in approaches, engagement and participation were not tracked as part of this study. The number of sessions attended and engagement in treatment could impact the self-rating scores and understanding of art therapy's benefit on QoL. Also, not using additional screening tools or questionnaires to assess for mild cognitive impairments or dementia could have affected the participant scores, full comprehension of the questions, and self-report accuracy. The study was conducted at two different facilities with a small sample size leading to limitations in the generalizability of the results. At this time, this study serves as an opportunity for future research on the impact of art therapy on QoL for older adults. Recommendations for this include administering the BBQ more frequently throughout the program, using a structured or manualized art therapy program to standardize the approach, reducing the variables impacting this study, and gathering data on program engagement.

Conclusion

This study demonstrates that art therapy can integrate the subjective domains through the development of Person and QoL-centered programming that meets the needs of aging adults as they redefine their sense of purpose, mastery, and agency. The researchers assert that the preliminary data on the benefits of art therapy on the subjective aspects of QoL is promising and

deserves further exploration. Considering the growing need for research on the benefits of art therapy for aging adults, it is essential for clinicians and care providers to consider subjective experiences that can enhance aging well.

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Tables

Table 1

Regression Results

Score	p-value	Direction	Interpretation
Overall BBQ Scores	.72	NA	No relationship
Leisure Total	.31	NA	No relationship
Leisure Satisfaction	.43	NA	No relationship
Leisure Importance	.085	+	Score improves over time
View my Life Total	.81	NA	No relationship
View my Life Satisfaction	.97	NA	No relationship
View my Life Importance	.57	NA	No relationship
Creative Total	.94	NA	No relationship
Creative Satisfaction	.81	NA	No relationship
Creative Importance	.68	NA	No relationship
Learning Total	.21	NA	No relationship
Learning Satisfaction	.39	NA	No relationship
Learning Importance	.075	+	Score improves over time
Friends and Friendships Total	.61	NA	No relationship
Friends and Friendship Satisfaction	.55	NA	No relationship
Friends and Friendship Importance	.51	NA	No relationship
Myself as a person total	.46	NA	No relationship
Myself as a person Satisfaction	.26	NA	No relationship
Myself as a person Importance	.74	NA	No relationship

Figures

Figure 1

Jane

Figure 2

Canvas at the Cottage

Figure 3

James