

Changes in Health-Related Quality of Life for Elderly People after Make-up Therapy in a Nursing Care Prevention Class

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Received: 01 December 2020; **Accepted:** 27 December 2020

Citation: Fujita W, Wada Y. Changes in Health-Related Quality of Life for Elderly People after Make-up Therapy in a Nursing Care Prevention Class. *Nur Primary Care*. 2020; 4(7): 1-5.

ABSTRACT

The purpose of this study is to clarify the changes in health-related quality of life (HRQOL) among 122 elderly people who participated in make-up therapy sessions at a nursing care prevention classroom before and after this intervention. An HRQOL scale SF8 Health Survey consisting of a questionnaire related to eight aspects of health ("physical functioning," "role physical," "bodily pain," "general health," "vitality," "social functioning," "role emotional," and "mental health") was implemented before the make-up therapy and one week after. Valid responses were received from 80 of the participants (response rate: 65.6%) and a Wilcoxon signed-rank test was used for comparative consideration of the results before and after the intervention. The results showed that although there was no significant difference in physical health categories, "vitality" and "mental health" scores were significantly higher after the make-up therapy, suggesting that make-up therapy may improve mental health.

Keywords

Elderly people, Make-up therapy, Nursing care prevention class, Health-related quality of life.

Introduction

As of October 2018, the total population in Japan was 126,440,000, and the population aged 65 years and older totaled 35,580,000, with a population aging rate of 28.1% [1]. Population aging will continue to increase. It is estimated that in 2036, it will reach 33.3%, or one in three people, [1] and there will be an unprecedented super-aging society. Preventive medical treatment, nursing care prevention, and the extension of a healthy life span are urgent needs. Recently, as a measure against a super-aging society, a project related to nursing care prevention and a longer healthy life span has been promoted, including the proposal that there is a need for participation in the community and improvement of medical treatment and nursing care, etc., so that people can live healthy, safe and purposeful lives. In local communities and facilities for the elderly, several programs have been created to entertain the elderly, such as exercise classes, recreational activities, singing, painting, and other initiatives, to

stimulate their willingness to live. In addition, it is also important to have interactions outside of their residences in order to have more varied lifestyles suited to the individual. However, in addition to the physical decline associated with aging, accumulated experiences of loss such as retirement, retirement from roles in the home, and death of relatives and acquaintances often lead to a lower range of activities and diminished motivation. Under such circumstances, make-up therapy is one of the measures that can impart vitality in the lives of the elderly. Make-up therapy is considered to have been developed in the United States at the time of World War II to hide facial blemishes and surgical scars, and in Japan, research on make-up therapy has been progressing since around 1990. Make-up therapy is a type of treatment using make-up that is intended to produce psychological and physiological therapeutic effects through psychological processes [2]. Make-up therapy is also viewed as a rehabilitative approach based on the hope that make-up will provide psychological, physiological, and social therapeutic benefits to participants through psychological processes [3]. Make-up has been shown to have psychological effects, such as increased positivity and increased mood, [4] with

mitigating effects against stresses such as anxiety, depression, and fatigue, and physiological effects, such as decreased cortisol levels for stress-related components [5]. In addition, increased sociality is observed, since those with a high frequency of outngstend to have a high frequency of using make-up [6]. In the research on make-up therapy in the elderly, efficacy has been observed, such as in the Practical Report on Make-up Therapy in the Elderly with Dementia [7] and the Effect of Make-up on Mental and Physical Functioning in the Elderly [8]. It is thought that make-up therapy can help people regain motivation and self-confidence from the inside, and arouse the motivation to go out and communicate, and that these are connected to an improvement in the quality of life (QOL) and the extension of a healthy lifespan. Therefore, this study aimed to implement make-up therapy in elderly persons attending nursing care prevention class sessions and to determine changes in health-related quality of life (HRQOL) before intervention and one week post-intervention.

Methods

Study design

The study was an experimental study.

Participants of the study

One hundred and twenty-two elderly persons aged 65 years and older participated in Nursing Prevention Class “A” sessions.

Study period

The study was conducted from June 2019to February 2020.

Content of the survey

The survey was conducted using a questionnaire on the attributes and make-up habits of the participants (Table 1) and a questionnaire on the evaluation scale (Table 2).

Attributes of Participants (Table 1)

Participants were asked to indicate their age, gender, family composition, and number of people living with them, and to answer the question “Do you normally use make-up?” Five answer options were given: “I have a daily skin care (skin toner, skin milk, etc.) and make-up routine,” “I have a daily skin care routine, but I only use make-up occasionally,” “I only have ask in care routine,” “I do nothing” and “Other.” The other question was open-ended, “What kind of person do you want to be?” Participants were able to answer freely.

Table 1: Attributes of Participants (N=80).

Age (M ± SD)	77.7 years (± 7.89)	
Sex	Females: 78 participants (97.5%)	Males: 2 participants (2.5%)
Cohabiting family members (M ± SD)	1.78 participants (± 0.87)	
Family composition	Single-person household: 34 participants (42.5%) Married couple: 21 participants (26.3%)	2 or more persons in one household: 23 participants (28.8%) Other: 2 participants (2.5%)

Note: M= Mean; SD = Standard Deviation

Evaluation Scale (Table 2)

For the assessment of HRQOL, the short version of the MOS 36-Item Short-Form Health Survey (SF-36™) known as the SF-8 Health Survey Acute Version [9] (hereinafter referred to as SF-8™) was used. The SF-8™ is a scale that measures QOL based on comprehensive health-related issues, with two summary scores for measuring health concepts (physical component summary score, mental component summary score) and eight subscales: 1) Physical functioning (PF); 2) Physical role (RP); 3) Bodily pain (BP); 4) General health (GH); and 5) Vitality (VT);6) Social functioning (SF);7) Emotional role (RE); and 8) Mental health (MH). For each question item, there were five-six response options, and responses to all questions were scored based on the national standard (mean, 50; standard deviation, 10).

Table 2: Health-related QOL before and after make-up therapy (N=80).

	Before Mean (SD)	After 1 week Mean (SD)	P-value
General health GH	49.13 (±6.85)	50.22 (±6.45)	0.3
Physical functioning PF	44.26 (±8.84)	45.88 (±7.38)	0.08
Role physical RP	45.55 (±8.98)	46.50 (±6.90)	0.35
Bodily pain BP	47.65 (±9.17)	47.55 (±7.68)	0.73
Vitality VT	47.93 (±7.03)	50.86 (±5.66)	**0.00
Social functioning SF	47.25 (±8.15)	47.88 (±7.22)	0.66
Mental health MH	48.37 (±7.13)	51.20 (±5.00)	**0.01
Role emotional RE	47.66 (±7.09)	47.94 (±6.82)	0.83
Physical component summary score PCS	47.2 (±8.67)	47.85 (±7.31)	0.67
Mental component summary score MCS	48.56 (±8.67)	50.48 (±5.70)	**0.01

Data collection method

After consent was obtained for participation in the survey, a questionnaire was carried out prior to the make-up therapy using Table 1and Table 2 (attributes and SF-8™), and the responses were collected. One week after the completion of the make-up therapy, the patients were asked to complete the Table 2 (SF-8™) again, and a stamped return envelope with a guide indicating the expected posting date was provided.

Naniwa Genki Juku

Naniwa Health School is a nursing care prevention class, which is part of the Osaka City Elderly Health and Welfare Plan and the Nursing Care Insurance Business Plan. The school targets Osaka City residents aged 65 years or older (Osaka City Nursing Care Insurance Category No. 1Insured Persons). In Osaka City, specialists come to local meeting places once a month to provide information that is useful for everyday life, through talks and practical sessions, including “how to strengthen your body to prevent falls,” nutrition and oral care,” and “dementia prevention.” They interact with the local community through activities such as music and handicrafts to increase mental and physical vitality.

Make-up therapy in practice

To guide the participants, an explanation was given first based on research findings, including the effects of make-up therapy,

namely that one develops a greater willingness to go out by caring for one's appearance, and that this can lead to dementia prevention. After that, an exercise session was carried out on the facial muscles (such as orbicularis oculi, orbicularis oris, and buccinators). The make-up instructor showed the participants photographs of singers and actors of the same generation as the participants and explained make-up and appearance for healthy and youthful looks as well as how to present one's outer feelings. Next, the instructor explained how to apply make-up to the eyebrows and lips as well as how to apply rouge, and the participants were asked to transcribe the details of various pictures of faces. After that, the participants were asked about their color preferences and make-up methods and were given personal advice on areas of concern. Using the make-up that they used normally, the participants applied the make-up themselves while looking in a mirror. For the male elderly participants, care for hair and eyebrows as well as skin care was explained.

Data analysis methods

After recording descriptive statistics on the attributes of the participants, the subscale scores and physical and mental component summary scores of SF-8™ were compared with the national standard deviation for each item (50 ± 10). In addition, a comparative study was carried out using the Wilcoxon signed rank test to observe the change in HRQOL before and after the make-up therapy. SPSS 21.0J for Windows was used for the analysis, and statistical processing was performed with a significance level set at 5%.

Ethical considerations

This study was approved by the Research Ethics Review Board of the affiliated facility of Osaka Shin-Ai College (approval number R18-10). Before the nursing care prevention class session, the purpose of the research was explained both in writing and verbally. It was also explained that participation in the investigation and research was voluntary, that participation/non-participation would not result in disadvantages, that it was possible to withdraw participation at any point, that privacy protection was guaranteed, that the handling of the data was stringent, and that individuals would not be identifiable. Willingness to participate was thereafter confirmed in writing.

Results

Attributes of participants

The questionnaire was collected from 94 participants (77.0%), and the number of valid responses was 80 (65.6%). The attributes of the participants are shown in Table 1. The age range was 65 to 92 years, with a mean age of $77.7 (\pm 7.89)$ years. The mean number of cohabiting family members was $1.78 (\pm 0.87)$. Family composition included single-person households: 34 participants (42.5%), married couples: 21 participants (26.3%), 2 or more households in one compound: 23 participants (28.8%), and other-two participants (2.5%). Therefore, single-person households were the largest group. In response to the question, "Do you normally use make-up?," 50% responded, "I have a daily skin care (skin toner, skin milk, etc.) and make-up routine," 25% responded, "I have a daily

skin care routine, but I only use make-up occasionally," 11.3% responded, "I only have skin care routine," 7.5% responded, "I do nothing," and 6.2% responded, "Other" (Figure 1). In response to the question, "What kind of person do you want to be after putting on make-up?" there were many answers such as "I want to look beautiful," "I want to look youthful," and "I want to look healthy." Some men enthusiastically took notes and asked questions so that they would apply make-up to their bedridden wives at home. In addition, as for the impressions after make-up therapy, there were opinions such as "I want to show my daughter or grand children" and "Let's go on a trip," and the participants exchanged smiles. There were also positive conversations such as "You are prettier now," "You look younger," etc.

Comparing HRQOL before and after make-up therapy

Table 2 shows a comparison of HRQOL before and after make-up therapy in the elderly. The subscales of SF-8™ shown in Table 2, including "general health," "physical functioning," "physical role," "bodily pain," "social functioning," and "emotional role," did not show any significant differences before and after make-up, but significant differences were found ($P < 0.01$), in "vitality," where by participants felt better after make-up therapy, and in "mental health," where anxiety and moodiness were alleviated. Although no difference was observed between before and after in the physical component summary score, there was a difference after make-up therapy in the mental component summary score.

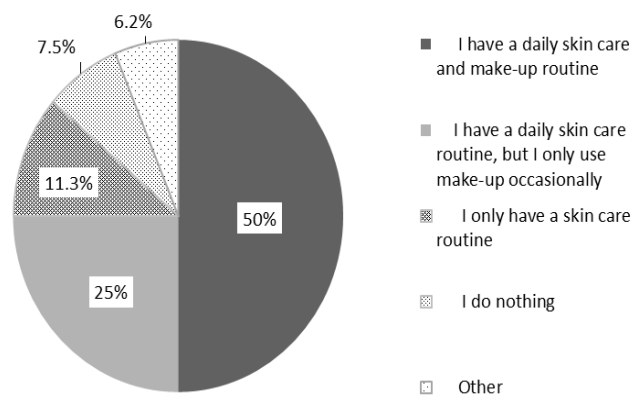


Figure 1: Make-up routines

Discussion

This study involved make-up therapy being conducted on elderly persons attending a nursing care prevention class session and a comparison of changes in HRQOL pre-intervention with one week post-intervention. The setting of the participants included single-person households as the largest group (more than a quarter), followed by married couples. In terms of households with persons aged 65 or older in 2017, the highest percentage (32.5%) were married couples, followed by single-person households (26.4%). It was found that many of the participants in the nursing prevention class sessions were elderly people living in single-person households. It can be inferred that they were actively participating in the sessions because the amount of time they were spending

alone at home was increasing and the amount of interaction with others was decreasing. Furthermore, 50% responded. "I have a daily skin care and make-up routine" and 25% responded. "I have a daily skin care routine, but I only use make-up occasionally" to the question. "Do you normally use make-up?" Therefore, about 90% of the participants had a skin care routine. Skin care is an action in which, by giving oneself love and attention, the "antenna of the mind" is focused on oneself, which is comforting, and the make-up "decorates" oneself, thereby redirecting the "antenna of the mind" to society, which is encouraging [10]. Although the practice of make-up in old age is influenced by the degree of social connectedness, such as sociality and sociability, [11] it is thought that elderly people attending nursing care prevention class sessions are more likely to go out when they have a skin care and make-up routine. Regarding the question, "What kind of person do you want to be after putting on make-up?" there were many descriptions such as "I want to look beautiful," "I want to look youthful," and "I want to look healthy." The biggest feature of make-up therapy is the immediate appearance of obvious results, the merit of which is that this becomes a motivation with prolonged efficacy. Self-care leads to self-awareness and increased self-awareness leads to self-confidence [12].

Before make-up therapy, all SF-8™ subscales were below the national standard value of 50. However, in the survey, one week after the implementation of make-up therapy, "general health," "vitality" and "mental health" exceeded the national standard value. In terms of the change in HRQOL between before make-up therapy and after one week, there were no differences in the subscales of SF-8™ of "general health," "physical functioning," "physical role," "bodily pain," "social functioning," "emotional role." However, in terms of "vitality," participants were feeling better after make-up therapy, and in "mental health," anxiety and moodiness were alleviated. Previous studies have verified a number of psychological effects, including that make-up has a psychosomatic relaxation effect in the short term and can improve mental well-being in the long term, thus contributing to the mental activation of the elderly, [13] and that make-up produces good feelings, leading to elevated mood and emotional stability [14]. The psychological effect of make-up therapy features the change that occurs immediately after completion (immediacy) and the ongoing change if it is continued (continuity), [15] and psychological effects were observed in this study even one week after the make-up therapy. Furthermore, it can be said that the mental component summary score was significantly higher after the make-up therapy intervention and that the feeling of mental health increased because of participation in make-up therapy, due to the increased desire to be seen by someone after becoming beautiful and the improvement in willingness to go out. It can also be said that there was increased sociability as seen from the conversations among participants. No changes in physical component summary scores were observed in the present survey. Although the feeling of physical health did not increase from a single make-up therapy session, it may increase by continuing make-up therapy, because the action of applying make-up uses a certain degree of muscular strength and there is a wide range of joint motion [15].

Some of the elderly participants participated in make-up therapy because they wanted to apply make-up to a bedridden wife at home. The combination of the main cohabiting nursing caregiver and the person being cared for who are 65 years old and over is on the rise (59.7%), [16] and it is surmised that the fewer connections with society due to old age nursing care and the increased physical and mental burden can lead to lower QOL of the care giver and the person being cared for. With the application of make-up among the elderly, the burdensome feeling in care givers can be reduced, [17] and feelings of satisfaction and achievement such as "happiness" and "it is worthwhile" can be experienced [13]. Furthermore, it is considered that make-up therapy has a psychological effect not only on the participants but also on the people around them. These days, in the era of the 100-year life, the difference between the average life expectancy and healthy life expectancy is about eight years for men and about 12 years for women [1]. The last decade or so of life generally involves limitations on daily activity due to health problems. The extension of a healthy life span is important for raising the QOL of the elderly, and it is understood that make-up therapy encourages a return of motivation and self-confidence from the inside, as well as increasing a sense of mental health.

Acknowledgements

We would like to express my deepest gratitude to the elderly participants in the nursing care prevention class who understood the purpose of this research and were happy to participate, to Kazumi Saito and the staff members of the Elderly Welfare Section in the Department of Elderly Policies at the Osaka City Social Welfare Bureau, and to the make-up instructor Saori Nagatani.

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