



Comparing the Effectiveness of Positive Psychology and Gestalt Therapy on Psychological Well-Being of Patients with Lung Cancer

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Quantitative Study

Abstract

Background: Lung cancer is one of the leading causes of death and is associated with a decline in social performance. The current study aimed to examine the impact of positive psychology and Gestalt methods on the psychological well-being of patients with lung cancer.

Methods: The current study was performed by quasi-experimental method with pre-test and post-test design. The statistical population included 187 patients with lung cancer referred to the oncology department of Al-Sadr Educational Hospital in Najaf, Iraq, in 2021 who were considered for this purpose. Simple random sampling was used to select 75 patients, divided into three groups: positive psychology, Gestalt, and control (each group included 25 patients). Positive psychology protocols and Gestalt therapy were implemented following psychotherapeutic principles, and their efficacy was assessed using the Ryff Psychological Well-being Scale. The data were analyzed using a multivariate covariance test via SPSS software.

Results: After controlling for the effect of the pre-test with the Wilks' Lambda index, there was a significant difference in psychological well-being between the groups ($P < 0.01$). Analysis of covariance (ANCOVA) test showed that the intervention improved all aspects of psychological well-being ($P < 0.01$). Finally, the Bonferroni post-hoc test was used to compare the two methods and concluded that the variables of personal growth, self-acceptance, objective life, and mastery of the environment differed significantly between Gestalt and positive psychology groups ($P < 0.001$).

Conclusion: Both positive psychology intervention and gestalt therapy have a positive effect on improving the well-being of patients with lung cancer. Additionally, Gestalt therapy has been more effective than positive psychology.

Keywords: Lung cancer; Group psychotherapy; Positive psychology; Gestalt therapy

Citation: Abd Alrazaq AAA, Fadhil AA, Hameed NM, Alsaadi AA, Hussein SF, Kadhum NAD. **Comparing the Effectiveness of Positive Psychology and Gestalt Therapy on Psychological Well-Being of Patients with Lung Cancer.** *Int J Body Mind Culture* 2022; 9(Special Issue): 22-33.

Received: 20 June 2022

Accepted: 12 July 2022

Introduction

Despite advancements in controlling and preventing infectious diseases in recent decades, the incidence and prevalence of chronic diseases have increased dramatically (Motamedi & Arefi, 2018; Zhang, Zhang, Yang, & Li, 2022). In some countries, cancer ranks second after cardiovascular disease (CVD) as the leading cause of death (Liu, Liu, Liu, Zhang, Li, & Ma, 2022). Lung cancer is one of the most prevalent cancers in the world, accounting for 1.35 million of the 9.10 million newly diagnosed cancers; 18.1 million of the 7.6 million cancer-related deaths occur in people with lung cancer. The highest number of cancer-related deaths is attributed to lung cancer, the third most prevalent cancer between the sexes; its prevalence among the elderly ranges between 3% and 15% (Khezri, Bagheri-Saveh, Kalhor, Rahnama, Roshani, & Salehi, 2022).

The majority of scientists concur that the concept of life quality always encompasses five dimensions. The physical dimension includes strength, vitality, the capacity to carry out daily tasks, and self-care. Symptoms of anxiety and depression can be found in this area of the brain (Guo, Eichler, Feng, Ingber, & Huang, 2006). A person's social life encompasses interactions with close family, friends, coworkers, and the rest of society (Sheikh-Wu, Anglade, Gattamorta, Xiao, & Downs, 2022). Spirituality also encompasses an individual's belief in life's meaning and purpose. The fifth dimension consists of disease-related symptoms or temporal changes; this dimension involves cases such as discomfort, nausea, and vomiting. The relationship between these dimensions is also extremely important (Valentine, Presley, Carbone, Shields, & Andersen, 2022).

On the other hand, researchers now agree that quality of life consists of objective factors (physical, psychological, and social functions) and mental factors (internal well-being). Mental factors emphasize life satisfaction, whereas objective factors emphasize material needs, participation in activities, and interpersonal connections (Zhou, Tang, Sun, Huang, Liu, & Kuang, 2022). Cognitive therapy aims to eliminate cognitive distortions and biases to improve human performance. In cognitive therapy, emphasis is placed on how clients process information which maintains their maladaptive emotions and behaviors (Sheikh-Wu, 2022). To induce positive feelings, behaviors, and thoughts in their patients, therapists interrogate, test, and discuss cognitive distortions (Hancox et al., 2022).

Mental health is a dynamic, complex, and multidimensional process influenced by environmental factors, social feedback, and personality traits such as sociality and independence (Askari, Tajeri, Sobhi-Gharamaleki, & Hatami, 2021; Schuller, 2013). In addition, hope, self-efficacy, self-esteem, a sense of cohesion, and optimism are effective resources for determining and maintaining the mental health of individuals (Yang, Liu, Wang, Wang, & Wang, 2014). Positive emotions play a significant role in humans' mental and physical health, and positive psychotherapy emphasizes individuals' positive processes and abilities. People who experience a great deal of psychological stress seek something far beyond pain relief. These people are on a quest to discover and enhance their strengths and live a life with meaning and purpose (Kurita, Garon, Stanton, & Meyerowitz, 2013). As a stress-blocker and facilitator of healthy coping mechanisms, positivity boosts mental well-being. It emphasizes using positive interventions to improve life satisfaction and happiness; lack of positive resources and negative thoughts in life cause psychological harm. Therefore, patients with cancer must utilize positive psychology to strive for

psychological well-being, increase self-esteem, enhance positive communication between themselves and others (Yang, Zheng, Sun, & Li, 2022).

Gestalt therapy is one of the many psychological approaches effective in teaching welfare skills (Sollmann, 2019). Consideration has been given to the Gestalt method's use of emotion facilitation techniques, promotion of internal control over external, and promotion of self-awareness (Qiu, Wen, Cui, & Feng, 2016). Gestalt therapy is a phenomenological method based on the existential approach that emphasizes human experiences, individual responsibility, and the ability to determine the experiences of the present and client and therapist experiences. This approach seeks to increase the individual's awareness of how others and his/her environment have influenced his/her personality development (Greenberg, Anand, & Sinclair, 2020). The primary objective of Gestalt therapy is to increase awareness and, with it, options. Awareness encompasses knowledge of the environment, knowledge of oneself, acceptance, and the ability to make contact (Bourque & Sherlock, 2017). By increasing their consciousness level, they can confront, accept, and fully experience the denied aspects of their mind. They can also be combined, completed, and moved in particular directions (Aryanto, Suwarjo, & Kurniawan, 2021).

The current study investigated the effect of psychological methods on the psychological well-being of patients with lung cancer. It can also be stated that programs are very effective in supporting the improvement of cancer patients' mental and psychological well-being and help the patients accept the problem and properly adapt to the situation, and also positively affect their physical health. Given that no prior study of a similar nature has been conducted in the city of Najaf, Iraq, the present study is extremely significant. As a result, positive and Gestalt psychology-based group meetings are required. For this purpose, they examined patients with lung cancer at Al-Sadr Teaching Hospital in Najaf in 2021. The current study aimed to assess the impact of positivist psychological methods and Gestalt therapy on the psychological well-being of patients with lung cancer.

Methods

The current study was performed by quasi-experimental method with pre-test and post-test design. The statistical population consisted of 187 patients diagnosed with lung cancer who were referred to the oncology department of Al-Sadr Educational Hospital in Najaf in 2021. These patients were taken into consideration for this study. A sampling method known as simple random sampling was used to select 75 patients, who were then split into three groups: control, positive psychology, and Gestalt therapy (each group included 25 patients). The effectiveness of positive psychology protocols and Gestalt therapy was evaluated using the Psychological Well-being Scale. These treatments were administered following psychotherapy principles (Ryff, 1989). Tables 1 and 2 describe the sessions associated with each intervention method of positive psychology and Gestalt therapy, respectively. Each intervention was performed in 8 sessions of 90 minutes (one weekly session).

Simple random sampling was used to select from the statistical population of the cancer ward at Al-Sadr Hospital (187 individuals). Each intervention and control group had a sample size of 25 people. Psychological Well-being Scale was used to determine the efficacy of these two methods. In the first stage, two distinct types of intervention approaches were presented to the two intervention groups as protocol descriptions.

Table 1. Description of positive psychology sessions

Session	Description of session
1	Getting to know the participants, the structure of positive-oriented psychotherapy, the role of the therapist, and the participants' responsibilities
2	Participants will develop superior abilities and positive emotions through discussing positive introduction stories and identifying the stories' capabilities.
3	Helping clients understand the role of memories (both positive and negative) in the permanence and durability of negative emotions, assisting those seeking treatment to express anger, protest, and other negative emotions, and discussing the psychological effects of these emotions
4	Helping the participants write a letter to a person they hold a grudge against (the letter will not be sent to the wrongdoer) and forgiving these individuals
5	Conducting mid-treatment reviews as an assessment of midstream progress, emphasizing optimism and hope
6	Helping those seeking treatment continue living with passion and meaning through relationships and connections with others and educating participants on the significance of recognizing and acknowledging family members' highest abilities
7	Assisting participants in becoming more acquainted with the concept of pleasure and enjoyment by relaxing in a warm bath, receiving a massage, or listening to music
8	Discussing the quality of life and the improvements and benefits of positive psychotherapy sessions

Then, their impact on the dependent variable was examined. Afterward, two intervention groups and a control group were compared regarding the effectiveness of these approaches. Among the inclusion criteria were lung cancer, mental health, psychological health, low family functioning, mental, physical, and group ability, at least a high school diploma, and treatment at Al-Sadr Teaching Hospital in Najaf in 2021. Exclusion criteria included absence for more than three sessions, exacerbation of complications associated with cancer-related treatments, neglect in completing homework, the occurrence of unexpected events, and refusal to participate in the study. So that the research would be ethical, the people who took part were told that they could quit at any time and that their identities would not be revealed. Moreover, the people who took part in the study gave their written permission.

Ryff (1989) created the Psychological Well-being Scale, which consists of six factors: autonomy, environmental mastery, personal growth, positive relationships with others, life purpose, and self-acceptance. Each question's response is based on a range from strongly disagree (score 1) to strongly agree (score 7). This examination yields scores between 98 and 588. In the Ryff study, Cronbach's alpha for self-acceptance was obtained 0.93, positive communication with others 91.1, and autonomy 0.86.

Table 2. Description of Gestalt therapy sessions

Session	Description of session
1	Acceptance of responsibility consisted of orienting the clients, familiarizing them with the Gestalt therapy framework, and stating the present tense rule. This method aims to ensure that every member of the group is solely accountable for their emotions, thoughts, and actions.
2	Bringing avoidance behaviors to the level of awareness to create a balanced state in participants
3	Asking participants to induce intense emotional states, such as confusion, despair, and failure, and assisting them in reconciling with these emotions..
4	Facilitating participants' resolution of unfinished business with others
5	Through exaggeration, participants are assisted in gaining self-awareness in order to modify their offensive speech and behaviors.
6	Facilitating participants' energetic and aggressive anti-cancer behavior
7	Participating in exercises with other members to prepare for a social role
8	Assisting participants in sharing their emotions with others, reviewing their experiences, and summarizing

Besides, mastery of the environment was obtained 0.90, purposefulness in life 0.90, and personal growth 0.87. In addition, for the overall structure, Cronbach's alpha was 0.92. According to Ryff, the Oxford Happiness Questionnaire, the Self-Esteem Questionnaire, and the Rosenberg Self-Esteem Scale were used to assess the validity of the Life Satisfaction Scale. The correlation between these test scores and the Psychological Well-being Scale was 0.47, 0.58, and 0.46, respectively. It is worth noting that the data were analyzed using a multivariate analysis of covariance (ANCOVA) in SPSS software (version 23, IBM Corporation, Armonk, NY, USA).

Results

First, the characteristics of the study participants were gathered. Table 3 presents the demographic characteristics of the individuals mentioned above.

Table 4 displays the mean values and standard deviations (SDs) of the various components of psychological well-being for each group. According to table 4, it is evident that the intervention improved psychological well-being across the board. In addition, neither the pre-test nor post-test stages of the control group revealed any changes.

The Levene's statistical test was used to investigate the homogeneity of variance of errors for various components of psychological well-being. Table 5 presents the results of the Levene's test. In table 5, the significance level of the psychological well-being factors indicates the equality of error variance for the dependent variable.

The Wilks' Lambda index was statistically significant at $P < 0.001$. After controlling for the effect of the pre-test, there was a significant difference in psychological well-being between the groups. A univariate analysis was conducted after correcting for the first type of error using the Bonferroni method to determine which components and groups were associated with the observed difference.

The analysis results of the comparison of Gestalt therapy and positive psychology in terms of psychological well-being were as follows: Wilks' Lambda = 0.249, $F = 7.34$, degree of freedom (df) = 12, error df = 108, eta coefficient = 0.538, $P < 0.001$.

The covariance of the psychological well-being components of the subjects is examined in table 6. Considering the significance values in table 6, it is abundantly clear that increasing the level of psychological well-being components represents a significant difference between groups and an intervention that has been demonstrated. Therefore, it can be concluded that the intervention improves all aspects of psychological well-being.

The Bonferroni post-hoc test was used to compare the two methods under consideration. Table 7 shows the comparative results for each component of psychological well-being.

Table 3. Demographic characteristics of the study participants

Demographic variables		Positive psychology group [n (%)]	Gestalt therapy [n (%)]	Control group [n (%)]
Gender	Men	11 (44)	12 (48)	13 (52)
	Women	14 (56)	13 (52)	12 (48)
Marital status	Single	4 (16)	7 (28)	5 (20)
	Married	21 (84)	19 (72)	20 (80)
Age (year)	Under 40	5 (20)	6 (24)	6 (24)
	41 to 50	9 (36)	10 (40)	8 (32)
	50 to 65	11 (44)	9 (36)	11 (44)
Education level	High school	13 (52)	11 (44)	12 (48)
	Diploma	7 (28)	7 (28)	8 (32)
	Undergraduate	5 (20)	7 (28)	5 (20)

Table 4. The mean and standard deviation (SD) of the components of psychological well-being

Component	State	Positive psychology group (mean ± SD)	Gestalt therapy (mean ± SD)	Control group (mean ± SD)
Autonomy	Pre-test	46.38 ± 5.39	46.79 ± 6.17	46.16 ± 6.57
	Post-test	50.19 ± 6.47	51.45 ± 6.68	46.39 ± 6.74
Personal growth	Pre-test	51.34 ± 8.53	51.89 ± 7.67	52.49 ± 8.43
	Post-test	55.19 ± 8.94	56.12 ± 8.49	52.04 ± 8.16
Self-acceptance	Pre-test	51.39 ± 7.14	51.27 ± 7.23	51.68 ± 7.02
	Post-test	54.64 ± 8.49	55.41 ± 7.83	51.34 ± 7.27
Objective life	Pre-test	45.29 ± 7.16	44.78 ± 6.68	45.16 ± 7.31
	Post-test	48.79 ± 7.49	49.42 ± 7.52	44.79 ± 7.09
Positive relationship	Pre-test	46.33 ± 8.72	45.86 ± 8.46	47.18 ± 8.62
	Post-test	51.42 ± 9.46	51.07 ± 9.58	46.57 ± 8.41
Mastery of the environment	Pre-test	47.76 ± 5.71	47.29 ± 5.68	47.84 ± 5.14
	Post-test	49.63 ± 6.34	49.54 ± 5.89	48.17 ± 6.17
Total	Pre-test	288.49 ± 18.43	287.88 ± 18.07	290.51 ± 18.76
	Post-test	309.86 ± 20.47	313.01 ± 21.37	289.30 ± 18.94

SD: Standard deviation

According to table 7, it is evident that the Gestalt therapy method differed significantly from the positive psychology method for variables including personal growth, self-acceptance, objective life, and mastery of the environment ($P < 0.001$). The Gestalt therapy method has been proven to be more effective than the positive psychology method.

Discussion

The presented study aimed to examine the effectiveness of positive psychology and Gestalt therapy on psychological well-being in lung cancer. There were statistically significant differences in all aspects of social well-being for intervention and between groups. According to the study's findings, patients with lung cancer reported greater psychological well-being after receiving both positive and Gestalt psychological interventions. As a result, it is safe to say that both approaches worked. It is also worth noting that the Gestalt approach effectiveness was more than positive psychology, according to the study's results. Personal growth, self-acceptance, objective life, and mastery of the environment are all variables that the Gestalt therapy method outperformed the positive psychology method ($P < 0.001$). Other researchers have conducted numerous studies with results consistent with the current investigation. Goerling et al. (2011) examined the effect of short-term psychiatric oncology interventions on the psychological outcome of patients with cancer undergoing cancer surgery. Anxiety and depression variables were significantly reduced for at-risk patients receiving oncology psychotherapy at the end of their care and during the follow-up period. Bertisch et al. (2014) investigated the association between perceived social support, psychological well-being, and marital adjustment in patients with cancer. According to the findings of their study, the psychological well-being variable has a positive and statistically significant association with the dimensions of family and important person support.

Table 5. Levene's test results for various psychological well-being components

Component	F	df ₁	df ₂	P-value
Autonomy	1.89	2	29	0.23
Personal growth	0.61	2	29	0.86
Self-acceptance	1.67	2	29	0.17
Objective life	0.34	2	29	0.94
Positive relationship	0.79	2	29	0.38
Mastery of the environment	0.83	2	29	0.71

df: Degree of freedom

Table 6. Analysis of covariance (ANCOVA) components of the subjects' psychological well-being

Component	Source of change	Total squares	df	Mean squares	F	P-value	Effect size
Autonomy	Intervention	12.47	2	6.24	1.43	0.007	0.513
	Group	21.52	2	10.76	8.39	0.003	
	Error	98.16	23	4.27	-	-	
Personal growth	Intervention	34.72	2	17.36	4.59	0.009	0.408
	Group	103.41	2	51.71	11.67	0.002	
	Error	164.07	23	7.13	-	-	
Self-acceptance	Intervention	27.49	2	13.75	1.24	0.003	0.471
	Group	78.16	2	39.08	6.38	0.001	
	Error	196.47	23	8.54	-	-	
Objective life	Intervention	57.38	2	28.69	2.31	0.002	0.439
	Group	129.48	2	64.74	9.41	0.001	
	Error	163.75	23	7.12	-	-	
Positive relationship	Intervention	49.30	2	24.65	1.48	0.009	0.542
	Group	124.29	2	62.15	7.62	0.004	
	Error	154.37	23	6.71	-	-	
Mastery of the environment	Intervention	27.56	2	13.78	1.31	0.006	0.492
	Group	86.44	2	43.22	6.47	0.003	
	Error	119.32	23	5.19	-	-	

df: Degree of freedom

Ochoa et al. (2017) created positive psychotherapy for anxious cancer survivors, considering post-traumatic development and anxiety. Positive psychotherapy reduces stress and post-traumatic effects and increases post-traumatic growth facilitation in anxious cancer survivors, according to the findings of this study.

Numerous researchers have studied the effect of positive psychology on patients over the years, evaluating various diseases in this context. Rouleau et al. (2015) demonstrated the efficacy of positive psychology in enhancing psychological well-being and pain management in individuals with chronic pain and physical impairment.

Table 7. The results of the Bonferroni test to compare groups

Paired comparison	Variable	Mean difference	Mean deviation	P-value
Gestalt therapy vs. positive psychology	Autonomy	0.67	0.13	0.942
	Personal growth	2.09	0.24	0.001
	Self-acceptance	2.43	0.32	0.001
	Objective life	0.61	0.09	0.001
	Positive relationship	0.29	0.03	0.091
	Mastery of the environment	1.54	0.17	0.001
Gestalt therapy vs. control group	Autonomy	4.38	1.18	0.001
	Autonomy	5.19	1.42	0.001
	Personal growth	6.16	1.73	0.007
	Self-acceptance	3.57	1.22	0.001
	Objective life	3.06	0.74	0.004
	Positive relationship	4.63	1.38	0.001
Positive psychology vs. control group	Mastery of the environment	3.71	1.29	0.009
	Autonomy	3.10	0.83	0.001
	Autonomy	3.73	1.04	0.005
	Personal growth	2.96	0.64	0.007
	Self-acceptance	2.77	0.72	0.001
	Objective life	3.09	0.78	0.001
Positive psychology vs. control group	Positive relationship	0.67	0.13	0.942
	Mastery of the environment	2.09	0.24	0.001
	Autonomy	2.43	0.32	0.001
	Autonomy	2.43	0.32	0.001

According to Lyubomirsky and Layous (2022), positive interventions reduce depression and increase happiness and psychological well-being in individuals by fostering positive emotions, thoughts, and behaviors and satisfying basic needs. The results of the study by Pietrowsky and Mikutta (2012) evaluated and confirmed the efficacy of positive psychology interventions in reducing depression and boosting resilience. The meta-analytic study by Sin and Lyubomirsky (2009) demonstrated that positive psychology interventions significantly increased mental well-being and happiness and reduced depression. According to research in this field, positive psychotherapy interventions focus on identifying strengths rather than weaknesses; they emphasize that this positively affects people's mental health as a means of enhancing the attractiveness and providing more meaning in life. For instance, increasing the subjects' awareness of their characteristics is likely to encourage them to utilize their abilities to perform their tasks at work, thereby increasing their workplace effectiveness.

In addition, in explaining the findings mentioned earlier, it can be stated that one of the most important principles in the positive approach and interventions related to this field, including the intervention used in the present study, is the emphasis on the development and expansion of positive emotions. Positive emotions include all positive feelings, such as pleasure, joy, intoxication, and comfort. This theory also contains the expansion, construction, refutation, resilience, and maturity hypotheses. According to the expansion hypothesis, positive emotions broaden the scope of limited and momentary thought and action and enable the individual to consider various possibilities and options in various situations. The spread of ideas contributes to the modification of beliefs. It also develops positive and effective cognitions based on the premise that positive emotions create positive cognitions. For instance, positive emotions enable individuals to adopt a more optimistic perspective, not subscribe to a series of negative, dry, and dogmatic beliefs and attitudes, and interpret life's difficulties differently. All of these suggestions contribute to a person's psychological health.

Various groups have been evaluated by researchers using Gestalt therapy. In their study of the effect of Gestalt therapy on reducing anxiety and aggression, Reilly and Jacobus (2007) demonstrated that this technique significantly impacted anxiety symptoms by boosting courage. Vail and Xenakis (2007) also conducted a study to assess the efficacy of cognitive therapy and Gestalt therapy on women's assertiveness, and they concluded that using these two therapeutic approaches effectively enhanced women's assertiveness. Based on this study's findings, it is possible that Gestalt training helps individuals establish a new relationship with their thoughts and enables them to exert greater control over maladaptive repetitive negative thoughts, alternatively, modifying what contributes to negative public perceptions. People are also taught techniques that can be used in the future and in specific social situations to manage the unreasonable demands of others and the anxiety resulting from their rejection. The present study's findings are consistent with those of studies that confirm the efficacy of psychological well-being as measured by the Gestalt method on assertiveness in various groups (Lau, Chan, Li, & Au, 2010).

Gestalt therapy appears to have assisted patients in exploring how to interact with elements of their environment and enhancing their awareness. In addition, by gaining awareness, they can reconcile the polarities and dualisms within themselves and move toward reintegrating all of their aspects. Further, they can bring their conflicts and struggles to live in the present, experience their conflicts to discover

new aspects of themselves, and determine their life's direction. This treatment has been powerful and effective in helping people become healthier and live more fulfilling lives. On the other hand, it can be said that in part of this therapy, which was related to cognitive therapy, patients experienced emotions followed by a more pleasant life by learning and using methods to deal with inflexible thinking and replacing logical thoughts. By repeating these exercises during treatment, patients appear to have learned how to combat irrational thoughts in real-life situations.

Integrating group counseling through positive psychology and Gestalt therapy effectively improves and enhances lung cancer patients' quality of life regarding physical health, mental health, living environment, and social relationships. Therefore, these methods have improved these individuals' emotional regulation skills, behavioral strategies for overcoming pain and physical weakness, and techniques for changing and correcting irrational thoughts. They also provide opportunities to learn through interaction with others and companionship. The present study's benefits include investigating two methods for promoting psychological well-being and their application to a particular type of cancer. Examining the various aspects of psychological health is also advantageous. The lack of follow-up and comparison of results to international standards are among its limitations. For future research, it is suggested that other methods be used to assess the psychological well-being of patients with lung cancer and that the results be compared to those of the present study. It is also suggested that similar interventions be performed in this study for other diseases and different follow-up.

Conclusion

In the current study, the results demonstrated that both positive and Gestalt psychological intervention techniques significantly improved the psychological well-being of patients with lung cancer. Therefore, it can be concluded that both approaches were successful. In addition, it is important to note that according to the results, the Gestalt approach has improved the psychological well-being more than positive psychology.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

None.

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