

## **The Effect of the Bonny Method of Guided Imagery and Music on the Mood and Life Quality of Cancer Patients**

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*Cancer patients continue to experience elevated levels of emotional distress, even after cancer treatment. Elevated emotional distress negatively impacts immune and endocrine functions and decreases life quality. This study explored the effectiveness of GIM in alleviating mood disturbance and improving quality of life in cancer patients. Eight volunteers with a cancer history were randomly assigned to either an experimental or a wait-list control group. Experimental subjects individually participated in 10 weekly GIM sessions. All subjects completed the Profile of Mood States (POMS) and Quality of Life—Cancer (QOL-CA) questionnaires pretest, posttest, and at a 6-week follow-up. Individuals who participated in GIM sessions scored better on both mood scores and quality of life scores at posttest than those participating in the control group. Additionally, mood and quality of life scores continued to improve in the experimental group, even after sessions were complete. Results indicate that GIM was effective in improving mood and quality of life in these cancer patients.*

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Cancer patients experience multiple stressors beginning with diagnosis and continuing throughout treatment and survivorship. Cancer treatment can be divided into four phases delineated by psychosocial and physical issues and corresponding treatment interventions (Andersen, 1992; Caudell, 1996). While there are obvi-

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ous benefits from medical cancer treatments such as surgery, chemotherapy, radiation therapy, and biological therapy, psychological suffering can be a side effect of such medical interventions (National Cancer Institute [NCI], 1998). After treatment completion, patients may resume previous family and professional roles; however, they also may perceive increased vulnerability to illness and death. The result of these experiences and perceptions can increase stress and the incidence of depression and anxiety, and can negatively impact immune and endocrine function, which decrease the quality of life.

Psychosocial therapies, including behavioral and cognitive interventions, have been shown effective in improving psychological and behavioral adjustment during cancer treatment and survivorship (Compass, Haaga, Keefe, Leitenberg, & Williams, 1998). Cognitive restructuring, stress management, group support, hypnosis, and guided imagery have all been shown effective in ameliorating symptoms such as pain, nausea, anxiety, and depression. The current study was designed to explore the effectiveness of the Bonny Method of Guided Imagery and Music in improving mood and quality of life in cancer patients. Currently, there are no published quantitative studies that explore GIM's effectiveness in improving mood and quality of life with cancer populations. Quantitative research in GIM is essential to examine its effectiveness as a complementary therapy during and after cancer treatment.

According to the American Cancer Society [ACS] (1998) and the NCI (1998), approximately 107 billion dollars is spent annually for cancer-related issues, including cancer treatment, loss of productivity, and mortality. Considering the economic and social impact of cancer, the medical community is becoming increasingly aware of the need to address issues other than physical ones during cancer treatment and recovery. Psychosocial variables such as personality style, social support, and emotional distress may impact disease progression and even mortality rates (Spiegel, 1996).

Emotional distress is a common experience after receiving a cancer diagnosis. Elevated levels of emotional distress can negatively influence life quality and negatively affect neuroendocrine and immunological measures. Survey research has demonstrated that breast cancer patients, patients in remission from Hodgkin's disease, and oral cavity cancer patients continue to experience elevated levels of emotional distress that are significantly greater than

their healthy controls (Espie, Freedlander, Campsie, Soutar, & Robertson, 1989; Kornblith et al., 1992; Saleeba, Weitzner, & Meyers, 1996; Ward, Viergutz, Tormey, deMuth, & Paulen, 1992; Zabora et al., 1997). Additionally, the levels of emotional distress were high enough to reach the criteria for psychiatric disorder and to motivate individuals to seek out mental health professionals (Kornblith et al., 1992; Zabora et al., 1997). Surveyed cancer patients also indicated higher anxiety levels than healthy controls (Espie et al., 1989; Ward et al., 1992). Specifically, these individuals reported increased difficulty preparing for the future and increased feelings of sadness and depression.

Lack of treatment for depression and anxiety can lead to decreases in quality of life and to difficulty returning to optimum levels of functioning. Research in the areas of cancer and quality of life indicates that emotional distress also affects physical parameters and treatment outcomes. An individual's experience of physical symptoms such as fatigue, which includes perceptions of tiredness and weakness, can contribute to their perception of well-being and satisfaction with treatment and life. Cancer patients score significantly higher on fatigue assessments than do healthy peers (Andrykowsky, Curran, & Lightner, 1998; Lee, 1999; Ritterband, 1999). In fact, fatigue scores are highly, positively correlated to depression (Abent, 1998; Lam, 1997; Ritterband, 1999). Increased fatigue can also negatively impact the perception of distress from additional physical symptoms, thereby decreasing quality of life (Lam, 1997).

Quality of life issues and corresponding treatment interventions continue to be important after cancer treatment. Cancer patients seek out interventions that assist in improving emotional status, physical strength, spiritual well-being, and overall life quality. Spiegel (1996) lists four elements of psychological treatment for cancer patients: social support, emotional expression, cognitive restructuring, and coping skills training. As stated previously, a cancer diagnosis may elicit many fears and anxieties. Thus diagnosed individuals need emotional support, education, and engagement in positive strategies to increase stress management.

Psychosocial interventions are generally effective in alleviating depression and anxiety. In a meta-analysis, Meyer and Mark (1995) explored the effectiveness of various psychosocial interventions for adult cancer patients. The dependent measures included emotional adjustment, functional assessment, medical measures, and

global measures. While there were significant effect sizes for dependent measures, there were no differences in effectiveness between the various interventions. Psychosocial treatments have generated positive statistical differences between treatment and control groups on variables of depression, anxiety, quality of life, and sense of hope (Baider, Uziely, & De-Nour, 1994; Compass et al., 1998; Post-White, 1993; Richardson et al., 1997; Sloman, 1995). As a psychosocial intervention, music therapy in cancer treatment also shows promise in alleviating emotional distress and improving quality of life.

Music therapy research specific to cancer treatment has primarily focused either on patients who are hospitalized or on outpatients receiving chemotherapy treatment. Music therapy clinicians and researchers have employed interventions to decrease pain and nausea, improve mood, increase physical strength, increase family communication, and increase quality of life (Boldt, 1996; Curtis, 1986; Magill-Levreault, 1993; McDougal-Miller, 1992; Sabo & Michael, 1996; Standley, 1992; Zimmerman, Pozehl, Duncan, & Schmitz, 1989). Anecdotal and empirical reports indicate music therapy interventions are effective in alleviating pain perception and nausea in cancer patients (Curtis, 1986; Sabo & Michael, 1996; Standley, 1992; Zimmerman et al., 1989). Music therapy interventions for cancer research and clinical interventions have included music listening, singing, music improvisation, and music and imagery (Boldt, 1996; Curtis, 1986; Sabo & Michael, 1996; Standley, 1992; Zimmerman et al., 1989).

Researchers have examined the combination of music and imagery to decrease anxiety and increase relaxation in healthy and clinical populations (Hammer, 1996; Logan, 1998; Russell, 1992). Highly anxious college students exposed to a combination of music and imagery experienced significantly lower state anxiety than did subjects in cognitive therapy, imagery-only, or music listening-only groups (Russell, 1992). Clients on a chemical dependency unit also had significantly lower state anxiety scores upon completion of a series of music and imagery sessions (Hammer, 1996).

Research suggests that music enhances imagery experiences by making images more vivid (McKinney, 1990; McKinney & Tims, 1995; Peach, 1984; Quittner & Glueckauf, 1983) and increasing absorption, or involvement in the imagery (Band, 1996). Quittner and Glueckauf (1983) explained that music also increases the ease of imagery evocation. In addition to making images more accessi-

ble and vivid, music-evoked images increase in duration and quality (McKinney & Tims, 1995; Quittner & Glueckauf, 1983).

The Bonny Method of Guided Imagery and Music (GIM) is an indepth music psychotherapy that utilizes specially sequenced Western Art music to elicit imagery and emotional expression. Helen Bonny, a music therapist at the Maryland Psychiatric Research Center, developed GIM as a possible alternative to LSD psychotherapy. While working at the Maryland Psychiatric Research Center, she developed a series of music programs which contained emotional characteristics based on the melodic contour, dynamic range, harmonic structure, rhythm, and orchestration (Bonny, 1980). Program names suggest the emotional characteristics that the music portrays, such as *Comforting*, *Positive Affect*, *Affect Release*, *Imagery*, and *Peak Experience* (Bonny, 1978). These music programs are standard music for use with GIM therapy.

GIM researchers have explored the method's effectiveness in alleviating anxiety and depression for a variety of client populations. A series of six Bonny method sessions is effective in alleviating depressed mood in healthy adults (McKinney, Antoni, Kumar, & Kumar, 1995; McKinney, Antoni, Kumar, Tims, & McCabe, 1997). Wrangsjö and Körlin (1995) compared the level of psychiatric symptoms in clients before and after a series of GIM sessions. Clients demonstrated significant decreases in obsessiveness, depression, anxiety, and hostility. There were also significant positive changes from pre to posttest in meaningfulness and manageability. Maack and Nolan (1999) surveyed former GIM clients to determine their perception regarding therapy outcomes. Reported benefits of GIM therapy included getting in touch with emotions, increased insight, increased relaxation, and spiritual growth. A significant number of clients experienced some improvement in self-esteem, anxiety, and other identified symptoms. A majority of clients also reported continued improvement after therapy termination, including continued satisfaction with GIM therapy, even several months after therapy termination.

Jacobi and Eisenberg (1994) also found that a series of 10 Bonny Method sessions was effective in decreasing pain perception in rheumatoid arthritis patients. Patients involved in GIM sessions also demonstrated significantly better physical measures of 50-foot walking speed and arthritis-involved joint counts from pretest to posttest. The authors further discovered a strong relationship be-

tween the decreases in psychological distress and in decreases in pain perception.

The Bonny Method of Guided Imagery and Music has been used with cancer patients to facilitate coping techniques that are useful throughout the treatment process, to encourage an active role in treatment, to facilitate emotional outlet for concerns, and to provide an avenue for expressing grief and hope (Logan, 1998). Logan contends GIM can be useful to provide an opening for the possibility of insight and healing through music and imagery. Additionally, she describes general benefits including providing comfort, a sense of security, a sense of control, and a means of self-expression, as well as reducing anxiety. Logan also states that through the client-generated imagery, individuals can experience an intervention that is specific to their particular needs and desires.

Research literature indicates that cancer patients continue to experience elevated levels of emotional distress that can negatively affect health and treatment outcomes. Group and individual psychosocial interventions are effective in alleviating emotional stress and physical symptoms, and in improving the quality of life for cancer patients. Music therapy as a psychosocial intervention has also demonstrated positive results in cancer treatment. Research in the Bonny Method of GIM has demonstrated significant, positive changes in mood after a series of sessions. There are no quantitative studies exploring the effectiveness of the Bonny Method on mood or quality of life in cancer patients. With this in mind, the following hypotheses were offered:

1. The experimental group receiving GIM therapy will experience a significantly better mood at posttest and follow-up than the control group.
2. The experimental group receiving GIM therapy will report significantly better quality of life at posttest and follow-up than the control group.

### Method

#### *Participants*

The volunteers included eight outpatient volunteers diagnosed with cancer. They were recruited from oncology offices in a large Midwestern city and surrounding communities. Volunteers met the following criteria: aged 30–65, completion or absence of ongoing radiation and/or chemotherapy treatment, abstinence from recre-

ational drugs, absence of current cigarette smoking, limited alcohol intake (no more than 10 drinks a week), no ongoing prednisone therapy, no history of acute psychiatric illness, and intact mental/cognitive functioning. Additionally, volunteers had a cancer history etiologically linked to the endocrine or the immune system, that is, ovarian, breast, prostate, endometrial, leukemia, or lymphoma. All volunteers provided informed consent prior to beginning the study protocol.

### *Materials*

Sessions occurred in a therapist's office located in a suburb of a large Midwestern city. The office was equipped with a CD sound system (Sony CDF-363), office chair, couch, and tape recorder (Sony Wm-D6C) with lapel microphone. A board-certified music therapist with endorsement in the Bonny Method of Guided Imagery and Music conducted the music and imagery sessions. Compact discs from the collection *Music for the Imagination* (Bonny & Bruscia, 1996) were used during the music and imagery portion of the session. This collection includes programmed Western art music specifically chosen for the Bonny Method process. Other classical selections were selected to supplement the compact disc collection if deemed clinically appropriate. Measurement materials included the Profile of Mood States (POMS) and the Quality of Life—Cancer Scale (QOL-CA).

McNair, Lorr, and Droppleman (1971) developed the Profile of Moods States (POMS) in an effort to provide an economical, efficient tool to measure affective states in a variety of clinical and normal populations. This 65-item questionnaire includes six mood or affective states: tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia, and confusion-bewilderment. Each item includes a 5-point (0–4) rating scale with anchors of “not at all,” “a little,” “moderately,” “quite a bit,” “extremely.” The respondent is requested to indicate how he or she has been feeling the past week, including the current day. Scoring involves summing item responses for each factor. A Total Mood Disturbance score can be obtained by summing all responses in the six primary mood factors, with vigor negatively weighted. A 4-week test retest reliability study yielded coefficients ranging from .61–.69. Although coefficients are lower than desirable, the authors conclude that with a fluctuating construct such as mood lower reliabilities are expected.

(McNair et al., 1971). The POMS was chosen for this study because there are established norms for cancer patients (Cella et al., 1989).

The Quality of Life—Cancer (QOL-CA) scale was developed by Padilla, Grant, Presant, and Ferrell (1996) in order to provide a short, easy to administer measure of well-being. For each item, respondents mark along a 100 mm linear analog scale with verbal anchors at each end. The scale includes five subscales: psychosocial-existential well-being, physical-functional well-being, symptom distress (nutrition), symptom distress (pain/bowel), and attitude of worry. Scoring involves measuring the placement of the response along the 100 mm line. Negative items are reversed by subtracting each response from 100. Total scale and subscale scores are then calculated by adding the score for each item and dividing by the total number of items. Coefficient alpha for the entire scale equals .91. Reliabilities for each of the subscales range from .52 through .88.

### *Research Design and Procedures*

The experiment was a small sample pretest-posttest, follow-up design. The eight subjects were randomly assigned to an experimental group or a wait-list control group, with  $n = 4$  subjects per group. One week prior to intervention, subjects completed self-report measures. Experimental subjects then completed a series of ten weekly sessions. Each GIM session lasted from one and a half to two hours. The session format was as follows:

1. Discussion of issues surrounding illness and current mood and establishment of session goals. (15 minutes)
2. Relaxation and imagery transition to music. (15 minutes)
3. Music listening. (30–40 minutes)
4. Client reviews imagery experience and relates imagery to personal process. Completion of POMS and QOL-CA. (30–40 minutes)

All subjects completed mood scales and quality of life measures as a pretest, one week after session 10, and at 6 weeks postintervention.

### *Results*

This study utilized a small sample pretest posttest with follow-up design. The independent variable had two levels: A treatment group who received a series of 10-weekly GIM sessions and a wait-list control group.



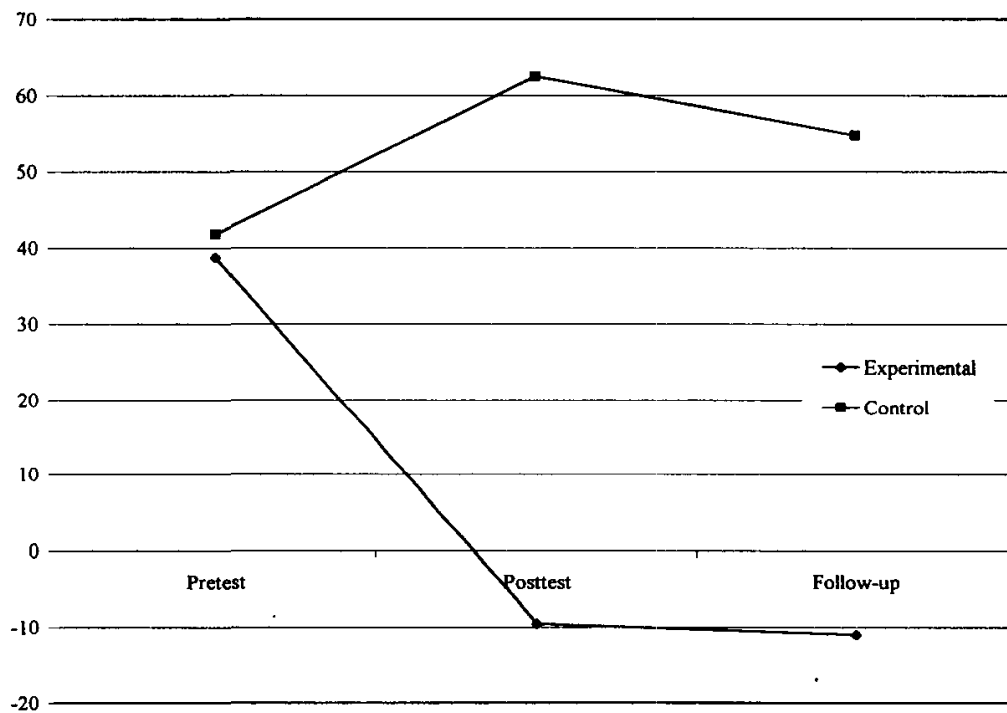


FIGURE 1.  
Group means for total mood disturbance (POMS)

The volunteers included eight women with a mean age of 48 and a standard deviation of 6.56 years. Of the eight volunteers, seven had a history of breast cancer and one a history of ovarian cancer. Chi-square analysis revealed no differences between the two groups in mean age, desire for help, education level, relaxation practice, and income, all  $ps > .05$ . The results from a one-sample  $t$ -test determined that the pretest Total Mood Disturbance means were not significantly different from the established norms for cancer patients,  $t(7) = .27$ ,  $t = .798$  (Cella et al., 1989).

Hypothesis 1 stated that the experimental group would report a better mood than the control group at posttest and at follow-up. A graph of group means illustrate the decrease in TMD scores for individuals receiving GIM, while the control group remained stable through the intervention period up to the follow-up (see Figure 1). Additionally, it is evident that there was a reduction in the standard deviation for the experimental group means over time (see Table 1). Hypothesis 1 was retained.

An examination of the subscore means for the GIM group reveals a reduction in the negative emotional states and a slight in-

TABLE 1

*Means and Standard Deviations for Pre- and Posttest, and Follow-up POMS Total Mood Disturbance*

Group	Pretest means (SD)	Posttest means (SD)	Follow-up means (SD)
Experimental	38.75 (42.58)	-9.50 (18.98)	-11.00 (11.37)
Control	41.75 (30.97)	62.50 (30.77)	54.75 (22.40)

crease in the vigor/activity subscore from pretest to posttest (see Table 2). The means for the anger/hostility and tension/anxiety subscores continued to show improvement at follow-up. There was, however, a slight increase in depression and confusion.

Hypothesis 2 stated that the experimental group would report a better quality of life than the control group at posttest and at follow-up. Table 3 contains Quality of Life—Cancer scale means and standard deviations for both experimental and control groups. The data indicate an increase in quality of life for the experimental group from pretest to posttest and continuing to follow-up. The mean scores for the control group remain relatively stable from pretest to posttest and follow-up. Factor means for the experimental group illustrate a substantial increase in all factors from pretest to posttest. Additional gains occurred from posttest to follow-up (see Figure 2). Hypothesis 2 was retained.

### Discussion

Individuals in the experimental group indicated a better mood at posttest and follow-up than the individuals in the control group.

TABLE 2

*Summary of Means and Standard Deviations for POMS Subscores for the Experimental Group*

Subscore	Pretest		Posttest		Follow-up	
	M	SD	M	SD	M	SD
Tension/anxiety	12.25	9.03	2.75	3.10	2.50	1.29
Depression/dejection	12.00	12.62	1.75	2.06	2.00	1.83
Anger/hostility	14.50	16.54	2.50	3.32	0.75	1.50
Vigor/activity	18.25	8.62	21.50	9.98	22.00	8.60
Fatigue/inertia	8.25	6.95	2.25	3.86	2.25	2.22
Confusion/bewilderment	10.00	6.06	2.75	2.22	3.50	3.32

TABLE 3

*Means and Standard Deviations for Pre- and Posttest, and Follow-up Quality of Life—Cancer Scale*

Group	Pretest means (SD)	Posttest means (SD)	Follow-up means (SD)
Experimental	75.40 (9.37)	-91.77 (12.25)	-96.36 (8.31)
Control	76.02 (8.82)	77.85 (6.88)	77.53 (7.62)

At posttest, individuals experienced an improvement in tension, fatigue, and confusion. The experimental group maintained the posttest gains through a six-week follow-up, with additional positive changes in depression and anger.

These positive changes in mood resulting from GIM sessions are congruent with other studies exploring the Bonny Method on mood in healthy adults (Maack & Nolan, 1999; McKinney et al.,

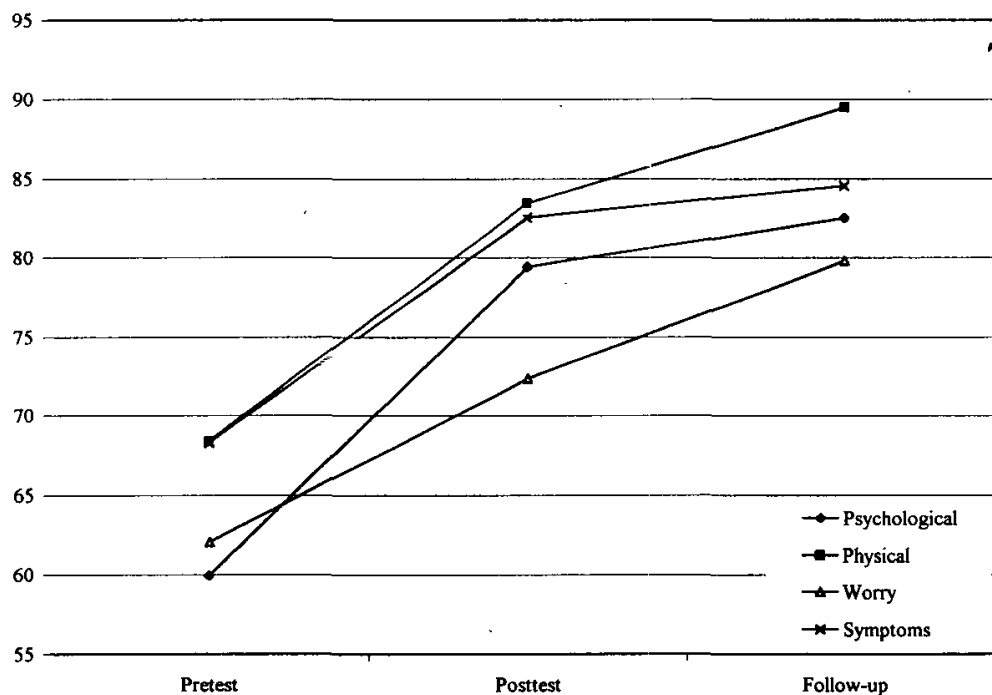


FIGURE 2.  
QOL-CA factor scores for experimental group

1997; Wrangsjö & Körlin, 1995). Of particular interest are intervention timing and the number of sessions included within the experimental period. McKinney et al. (1997) included six bi-weekly sessions and found significant improvement in mood over time. Hammer (1996) utilized a group format and also found significant changes in mood for individuals hospitalized for chemical dependency. Maack and Nolan (1999) and Wrangsjö and Körlin (1995) included varying session numbers and session timing, but also reported positive changes resulting from GIM sessions.

Volunteers in the experimental group also reported a better quality of life at follow-up than those in the control group. There are no published music therapy studies that quantitatively explore improvements in quality of life; however, anecdotal reports suggest that music therapy interventions improve quality of life (Aldrige, 1993).

Quality of life measurement includes multiple factors, such as physical well-being, psychosocial adjustment, and spiritual well-being. The current study did not assess changes in spiritual well-being as a result of GIM sessions. Spiritual and existential issues are common for cancer patients during and after treatment. An informal examination of imagery content suggests that spiritual images frequently occurred during GIM sessions. Future research studies exploring quality of life should include specific measurement of spiritual changes after a GIM series. An examination of the relationships between mood changes and spiritual changes would also be useful.

Reviewing the results of this study suggests several possible research studies for the future. Replication of this study with a larger sample would provide the opportunity for generalization to cancer patients currently in treatment and those individuals identified as survivors. Including an assessment of health behaviors might determine whether the health behaviors change over time with improvements in mood and quality of life. Finally, further studies are needed to clarify appropriate GIM session timing and dose.

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