

## Research Article

# Personal Traits that Influence Resilience in Women Who Completed Chemotherapy for Breast Cancer

Sulleh Gbande<sup>1\*</sup>, Lilian Akorfa Ohene<sup>2</sup>, Lydia Aziato<sup>3</sup> and Richard Abrahamai Seidu<sup>4</sup>

<sup>1</sup>Department of Nursing, University of Health of Health and Allied Sciences, School of Nursing and Midwifery, Ho-PMB, 31. Volta Region, Ghana

<sup>2</sup>School of Nursing and Midwifery, University of Ghana, Ghana

<sup>3</sup>University of Health of Health and Allied Sciences, School of Nursing and Midwifery, Ho-PMB, 31. Volta Region, Ghana

\***Corresponding authors:** Dr. Sulleh Gbande, PhD, Lecturer, Department of Nursing, University of Health of Health and Allied Sciences, School of Nursing and Midwifery, Ho-PMB, 31. Volta Region, Ghana

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## Abstract

**Background:** In Ghana, chemotherapy is the primary treatment for breast cancer, often leading to significant physical and emotional challenges due to drug side effects. While global literature highlights improved breast cancer survival rates, there is limited research on the personal traits influencing resilience in Ghanaian women who undergo chemotherapy for breast cancer, despite their remarkable ability to navigate treatment challenges and its aftermath.

**Methods:** This exploratory descriptive qualitative study investigated the perspectives of 14 breast cancer survivors in Accra who endured chemotherapy-related distress. Participants were recruited purposively, meeting specific criteria, and interviewed in English using a semi-structured guide. Data collection and analysis were conducted concurrently. Data were analyzed inductively to uncover themes without predefined frameworks. Trustworthiness was ensured through strategies like member checking, triangulation, and reflexivity. Ethical approval was obtained from Noguchi Memorial Institute for Medical Research (NMIMR), and participants provided informed consent before being audio-recorded. Interviews lasted 45–60 minutes, achieving saturation by the 12th interview, with two additional sessions confirming findings. Identified codes were grouped into sub-themes and themes with findings highlighting survivors' lived experiences and the care they received.

**Results:** Four (4) themes; hope, optimism, self-esteem, and confidence and 13 sub-themes emerged from the data.

**Conclusions:** In the absence of structured support systems, resilience in surviving breast cancer treatment is primarily shaped by individual personality traits such as hope, optimism, self-esteem, and confidence and emotional responses to the illness. A more structured support system aimed at fostering resilience and boosting personal traits among women receiving chemotherapy for breast cancer is highly recommended.

**Keywords:** Personal traits, Resilience, Women, Breast cancer, Chemotherapy

## Background to the Study

Breast cancer remains one of the most prevalent cancers affecting women globally. According to the [1], breast cancer accounts for 12.5% of all new cancer cases worldwide, making it a significant public health challenge. Advances in treatment, including surgery, radiation therapy, and systemic therapies such as chemotherapy, have significantly improved survival rates over the past decades. Despite these advancements, chemotherapy—a cornerstone in breast cancer treatment—is often associated with severe physical and psychological burdens, including fatigue, nausea, emotional distress, and disruption of daily life [2]. For women undergoing chemotherapy, these challenges can impact their overall quality of life and mental health.

In low- and middle-income countries (LMICs), including sub-Saharan Africa, the burden of breast cancer is compounded by late-stage diagnoses, limited access to healthcare resources, and cultural stigmas surrounding cancer [3]. In Ghana, breast cancer is the leading malignancy among women, with an estimated incidence rate of 20.4

per 100,000 women [4]. The increasing survival rates call for a shift in focus from merely treating the disease to addressing the psychosocial and emotional needs of survivors [5].

Women who complete chemotherapy for breast cancer often exhibit remarkable resilience, enabling them to navigate the challenges posed by the treatment and its aftermath. Resilience, defined as the ability to recover from or adapt to adversity, is a multidimensional construct influenced by personal, social, and environmental factors [6]. However, while there is an expanding body of literature on resilience in cancer survivors, the specific personal traits that influence resilience in women who have completed chemotherapy for breast cancer remain underexplored. Existing research highlights the importance of psychological factors such as optimism, emotional regulation, and self-efficacy, as well as the role of social support and lifestyle choices in fostering resilience [7,8].

In the Ghanaian context, breast cancer survivors often face unique cultural and socioeconomic challenges, including limited access to

psychosocial support services and societal expectations of stoicism [9]. The lack of context-specific studies addressing the personal traits that contribute to resilience in this population limits the ability of healthcare providers to develop effective, tailored interventions. Understanding these traits is crucial for designing psychosocial programs that enhance the well-being and survivorship experiences of women who have undergone chemotherapy for breast cancer.

## Aim of the Study

This study aims to explore the personal traits that influence resilience in women who have completed chemotherapy for breast cancer.

## Methods

### Research Design

The study utilized an exploratory descriptive qualitative research design, deemed suitable for providing detailed insights into the perspectives of women who survived breast cancer and endured chemotherapy-related distress, supported by the care they received [10,11].

### Participants and Setting

The research was conducted in Accra, targeting women aged 18 and older diagnosed with breast cancer and residing within the Accra Metropolis. Participants met specific inclusion criteria: a breast cancer diagnosis, completion of chemotherapy, and fluency in English. Exclusion criteria included newly diagnosed breast cancer patients, those with altered mental status, and individuals who were acutely ill or in pain. A total of 14 participants were recruited using purposive sampling.

### Data Collection Method

Individual qualitative interviews were conducted with the 14 participants. Permission was obtained from the Teaching Hospital where the study took place. Eligible participants were recruited and provided with information sheets explained in simple terms. Interview sessions were arranged through phone calls. A semi-structured interview guide ensured the focus of the study. Face-to-face interviews, conducted in English at participants' convenience, were audio-recorded with their consent and lasted between 45 minutes and an hour. Saturation was achieved after interviewing 12 participants, with two additional interviews conducted to confirm saturation.

### Data Analysis

Data were analyzed using inductive content analysis [12]. This method involves deriving categories, subthemes, and themes directly from the data without relying on pre-existing frameworks, allowing for the emergence of new insights. Data analysis was conducted concurrently with data collection [12,13]. Transcriptions were performed verbatim and reviewed multiple times by the first author to extract meaning. Codes representing similar concepts were grouped into subthemes, and related subthemes were organized into overarching themes. To ensure objectivity, the second and third authors reviewed the process to eliminate potential biases.

## Trustworthiness and Reflexivity

To ensure rigor, trustworthiness, and reflexivity, various strategies were employed [14-16]. Member checking involved seeking participant clarification on unclear responses and confirming their statements during interviews. Data triangulation compared field notes with transcripts to accurately represent participants' experiences. Dependability was reinforced by involving impartial reviewers—the second and third authors, who supervised the first author's process. Reflexivity was maintained through bracketing, separating the researchers' personal experiences from the study to minimize biases. Confirmability was achieved by meticulously reviewing transcripts before interpretation, while an audit trail documented raw data, analysis notes, field diaries, and recordings.

## Ethical Considerations

The study received ethical approval from the Noguchi Memorial Institute for Medical Research in Ghana (NMIMR), under reference number NMIMR-IRB CPN 111/15-16. Participants were provided with detailed information about the study's objectives, procedures, risks, and benefits. Informed consent was obtained through signed or thumb-printed forms, ensuring inclusivity for participants of varying literacy levels.

## Results

### Demographic Characteristics of Participants

The study involved 14 women aged 38 to 78 years. Specifically, 3 participants were in their late 30s, 5 in their early 40s, 3 in their early 50s, 1 in their early 60s, and 2 in their late 70s. The mean age was approximately 49.5 years, with a standard deviation of 13.6 years. Educational backgrounds varied, with 4 participants having secondary education, 2 with vocational training, and 8 with tertiary education. Regarding religious affiliations, 10 participants were Christians, 3 Muslims, and 1 Traditionalist.

The majority of participants (79%) were married, with marriage durations ranging from 1 to 38 years; 1 participant was single, and 2 were widows. The number of children ranged from 1 to 5. Participants' occupations included teachers, nurses, fashion designers, bankers, and businesswomen. Breast cancer diagnoses were made between 2013 and 2016, with treatments completed between 2014 and 2017. The participants represented various tribes, including Ga, Akan, Adangbe, Ewe, Hausa, and Dagaare. For more details, refer to Table 1.

To answer the research question, what are the personal traits that influence resilience among breast cancer women who received chemotherapy for breast cancer, four (4) themes and fourteen sub-themes emerged from the data. The themes are: hope, optimism, self-esteem, and confidence. See Table 2 for details.

### Theme One: Hope

After the analysis of data, the personal trait that influenced resilience in women who completed chemotherapy for breast cancer were; hope in nurses, hope in doctors, hope in patients, themselves, hope in breast cancer survivors and hope in God.

**Table 1:** Demographic characteristics of participants.

| Synonyms | Age | Level of education | Religion    | Marital status | No. of children | Occupation         | Date of diagnosis | Date of completing treatment | Tribe   |
|----------|-----|--------------------|-------------|----------------|-----------------|--------------------|-------------------|------------------------------|---------|
| P1       | 44  | Tertiary           | Christian   | Married        | 3               | Teacher            | 2015              | 2016                         | Ga      |
| P2       | 77  | Secondary          | Traditional | Widow          | 5               | Trader             | 2014              | 2015                         | Ga      |
| P3       | 50  | Tertiary           | Christian   | Married        | 4               | Nursing            | 2013              | 2014                         | Ga      |
| P4       | 38  | Vocational         | Christian   | Married        | 1               | Fashion designer   | 2016              | 2017                         | Adangbe |
| P5       | 61  | Secondary          | Christian   | Married        | 2               | Pensioner          | 2013              | 2014                         | Ewe     |
| P6       | 38  | Tertiary           | Christian   | Married        | 2               | Fashion designer   | 2016              | 2017                         | Ga      |
| P7       | 44  | Secondary          | Muslim      | Married        | 2               | Textile telephones | 2014              | 2015                         | Dagaare |
| P8       | 50  | Tertiary           | Christian   | Married        | 3               | Teacher            | 2016              | 2015                         | Aka     |
| P9       | 44  | Tertiary           | Muslim      | Married        | 4               | Teacher            | 2013              | 2014                         | Hausa   |
| P10      | 43  | Tertiary           | Christian   | Married        | 2               | Banker             | 2015              | 2016                         | Akan    |
| p11      | 43  | Vocational         | Muslim      | Married        | 5               | Fashion designer   | 2013              | 2014                         | Hausa   |
| P12      | 39  | Tertiary           | Christian   | Married        | 2               | Teacher            | 2016              | 2017                         | Akan    |
| P13      | 78  | Tertiary           | Christian   | Widow          | 3               | Pensioner          | 2015              | 2016                         | Ewe     |
| P14      | 51  | Secondary          | Christian   | Single         | 2               | Business women     | 2014              | 2015                         | Akan    |

**Table 2:** Themes and Sub-themes.

| Themes         | Sub-themes   |
|----------------|--|
| 1. Hope        | <ul style="list-style-type: none"> <li>● Hope in nurses</li> <li>● Hope in doctors</li> <li>● Hope in patients themselves</li> <li>● Breast cancer survivors</li> <li>● Hope in God</li> </ul> |
| 2. Optimism    | <ul style="list-style-type: none"> <li>● Focus on positive mindset</li> <li>● Avoidance coping</li> <li>● Acceptance coping</li> </ul>   |
| 3. Self-esteem | <ul style="list-style-type: none"> <li>● Strong inner voice/Self-motivation,</li> <li>● Setting of new goals</li> </ul>  |
| 4. Confidence  | <ul style="list-style-type: none"> <li>● Self-reliance</li> <li>● Preparedness</li> <li>● Confidence in health care practitionerS</li> </ul>   |

### Hope in Doctors

The participants expressed hope and expectations in the doctors that took care of them during chemotherapy. They expressed that they were hopeful that doctors were going to help them to recover because they were under their cared.

*“I put my trust in the doctors because I wanted recovery and they were those to care for me and so they became my only hope”. P1*

*“...so, when I came to the hospital and then the treatment started, I trusted and also had expectation that the doctors were going to help me through my chemotherapy”. P14*

### Hope in Nurses

Participants narrated that prior to their chemotherapy they were scared based on the unknown outcome of their treatment. However, they reported that their experiences with nurses on the first day at the hospital changed their believe as they received warm reception from nurses. To the participants, that gave them hope that their treatment journey will be smooth and probably end well

*“my experience with the first nurse on my first day gave me hope and this expectation kept repeating itself till I finished my treatment”. P10*

*“... formerly I perceived nurses as unintelligent workers who don't care about patients but my chemo provided me with an opportunity to really know them. They offered me hope throughout my days during hospitalization. I can say from day one at the OPD what the nurse there counselled me on gave me hope athat my cancer journey was going to smooth”. P2*

*“For me, I was hopeful and this was placed within the context of finding meaning in my suffering, the pain and sadness I experienced every day during my chemo was too much but I didn't give-up. I knew I was going to get hope due to the good relationship the nurses were offering to us, that was quiet assuring”. P4*

### Hope in Participants Themselves

Majority of the participants also placed their hope in themselves for recovery, as they believed that they are winners and can persevere throughout the treatment.

*...so, all days I kept hoping for the best. I didn't look down upon myself no, no way. I kept telling myself you are a conqueror; you are more than a conqueror”. P2*

*“I am one person who hardly quit. I persevere. Within me is full of hope”. P8*

*“I took it easy and I have to, because all I have at that time was hope. Personally, I take everything in my life easy although I was anxious initially, I later told myself that if I am worried, I can't change anything and so, I have to just hope for the better”. P6*

### Hopes in Breast Cancer Survivors

Other participants placed their hopes in breast cancer survivors who reassured them and wished them a speedy recovery. The personal testimonies of the survivors were sources of hope, which took away participants fears.

*“There was this organisation called Breast Cancer Survivors Association, whose members came to give me and my family hope*

by offering us more information about breast cancer and how I can contribute to my survival, after all, they were living testimonies for us". P9

"...so, I was not afraid, after all some patient had recovered from same condition and others from similar diagnosis and they were all there to offer us any information we wanted. That gave many of us hope because here are people who suffered what I am suffering and if they recovered from it that is assuring". P12.

### Hope in God

Other participants were hopeful that God will see them through their chemotherapy. They believed and trusted in the blood of Jesus.

—There were instances when I used to sing this song, "my hope is built on nothing less than Jesus blood and righteousness" (long laugh) oh yeah and you feel God's presence around you. So, I was hopeful God will do something". P13

"... Hope is belief and beliefs are found in God. So, all I needed at that time was hope in God so that even if i die as they say it can lead to, i will go to heaven and that if I live I live for Him. So, my hope was only on Christ and Christ alone (laughter)". P8

### Theme Two: Optimism

The second theme that emerged from the data was optimism with the sub-themes; focus on positive mindset, avoidance coping and acceptance coping.

#### Focus on Positive Mindset

Participants indicated that they looked at the positive side of their conditions. They reported that by focusing on what they could do to keep healthy rather than on the negative circumstances of life kept them moving on with life.

—I was inclined to look on the more positive side of my condition and to expect the greatest result from treatment since many women who came to the hospital had recovered, so I tuned my mind that surely I can recover". P8

"... believing in myself with much focus enables me to look more on what I could do to help myself. So, I kept saying I can overcome". P7

#### Avoidance Coping

Participants narrated that they adopted avoided coping mechanism during their chemotherapy journey because of some misconceptions about breast cancer and its causes.

"...In fact, I was stable in mind that am going to get well. I tried as much not to let my church people know about it except my pastor and even at my work place only my brother-in-law knew about it because I trusted him. People gossip a lot and some of them don't even think cancer can be cured and I never wanted any bad advice so I kept it to myself because I believed I was going to be healed". P10.

"... you know the misconceptions of Ghanaians about cancer. Most of them believed it is gotten through fornication and adultery, and others it is a curse and all that, but with my background as a health worker I

was quite certain about the future that I will be well after all, we have discharged many with complete recovery from breast cancer". P5.

### Acceptance Coping

Some participants also narrated that they were able to cope with cancer and treatment duress by acceptance their present condition as a natural phenomenon, a circumstance they have no control of.

"...you know!! a condition like cancer, if you are not a person that is willing to accept that it is a condition you have no control of, it will be difficult to adjust to its treatments...I initially had a similar challenge till my second cycle of chemotherapy when I came to terms with the fact that I need to accept my present situation (cancer diagnosis) and move on. That really did the trick for me". P14

Without first accepting to the fact that hey, this is the impact of cancer and chemotherapy...my brother, you will run away from the chemo, the drugs are many and come with a lot of side effects and for me to think I can take all these medications and get well, then I needed to be optimistic and accept all the effects knowing that its but for a while". P12

### Self-Esteem

Participants narrated that they were able to cope with cancer and its treatment through a feeling of strong inner voice/self-motivation and setting of new goals.

#### Strong Inner Voice/Self-Motivation

Participants indicated that their ability to even stretch their hands and switch on their phones was enough motivation for them to trust that their treatment journey will be successful. Other participants revealed that there was a strong inner voice encouraging them to keep going

"To the extent that I find it's helpful to spend time to switch on my phone and take a selfie and forward it to my loved ones like before was enough for me, actually I had a strong feeling that I am fine and anything from someone to me is the person's opinion". P3

"I'm a person with deep feelings; I could hear an inner voice saying to me, this is nothing, God will help you out. It is that voice that kept encouraging me, so I had a positive feeling that I will get well, yeah". P13

#### Setting of New Goals

Participants narrated that they never bordered to compare themselves to those who could not successfully recover from breast cancer. According to these participants, they set new goals and tune their minds on happy moments in order to overcome the effects of the chemotherapy and the disease burden.

"Hmmm, I did so many things to help me, like .... I never compare myself to any one.... I mean those who couldn't make it through treatment, no. I know people died from breast cancer so I set new goals and thought for myself with the feeling, I am born to win. I tell you with that opinion I could move mountains". P2.

"You see many people focus on the problem and cry and complain meanwhile those you complain to can't help you out. As for me, the secret has been that this breast cancer is just one of many problems in life so

*just this specific situation can't stop me from going on with life, so I set new goals for myself". P1*

### **Confidence**

Confidence is another positive factor that influenced resilience among women with breast cancer who received chemotherapy. Participants revealed that they were self-reliant, prepared and had Confidence in health care practitioners

### **Self-reliant**

participants expressed confidence in themselves and that contributed to their recovery. They said that self-confidence is needed to manage the effect of chemotherapy treatment.

*"I needed confidence my-self, because to take chemo for a whole year (long laugh) my son, you need confidence, yes, else you can't finish the chemo, you will stop because of its effects". P3*

*"...to take chemo for almost one year it's very important to be confident else I couldn't have been able to finish my treatment. When you are not confident you will say is ok, I won't take the treatment again because the side effects are a lot". P5*

*Confidence is what got me here. I needed confidence to enable me stay and complete my treatment. When you are on chemo, and you are not confident in yourself you can't stay to complete the chemo the side effects are just too many". P7.*

### **Preparedness**

Participants narrated that they used past experiences from their mensural pains to cope with chemotherapy effects.

*"...my mensural cycle pains have not been different from my cancer experiences...so for me I have learn how to cope with pain and life struggles since I started menstruating". P4*

*"My past experience on menstrual pains has been a blessing in disguise. It has taught me how to cope with pain, so, I see this cancer experiences as similar to my monthly cycle pains and that helping me adjust to treatment". P6*

### **Confidence in Health Care Practitioners**

Others expressed the opinion that they survived due to the confidence they had in doctors and nurses during the chemotherapy. They were of the conviction that the competence of the health team will help them, most importantly after their first chemotherapy dose.

*"I was of the conviction that I needed confidence from the health care team to be able to stay through after receiving my first dose of chemo. My whole system changed and I could feel am no more the same and at this point all I need was to be sure the nurses and doctors knew what they were about". P9.*

*"...So, all I needed was to see them (nurses and doctors) confident in their procedures to assure me I will be fine because of the drug's effects I was experiencing; and when I saw the confidence level the nurses showed (xxxx name mentioned) to me during my chemo I became ok throughout in my mind and that helped". P1*

## **Discussion**

The findings of this study revealed four themes that encapsulate the personal traits influencing resilience among women who received chemotherapy for breast cancer: hope, optimism, self-esteem, and confidence. These themes are further enriched by fourteen sub-themes that provide deeper insights into the various ways these traits manifest. This discussion examines these findings in the context of existing literature, emphasizing their alignment with prior studies while acknowledging areas of divergence.

### **Hope**

Hope emerged as a pivotal trait, with participants expressing reliance on sources such as nurses, doctors, themselves, breast cancer survivors, and God. This aligns with studies that highlight hope as a critical component of psychological resilience in cancer patients [17]. Hope in healthcare providers, particularly doctors and nurses, was tied to trust in their expertise and care quality. Similar findings are reported by [18], who found that positive patient-provider interactions bolster hope and treatment adherence. Hope derived from breast cancer survivors further supports prior research, such as [19,20], which underscores the impact of peer support on emotional well-being and resilience.

However, the centrality of hope in God reflects cultural and spiritual dimensions unique to the participants. Studies like those of Nyarko and colleagues affirm the significant role of spirituality in the resilience of African cancer patients [21,22], underscoring the interplay between cultural beliefs and coping mechanisms. Conversely, research in predominantly secular contexts [23] places less emphasis on spiritual hope, highlighting a cultural variance.

### **Optimism**

Optimism, expressed through positive mindsets, avoidance coping, and acceptance coping, was another prominent trait. Participants' ability to focus on the positives aligns with [24] conceptualization of optimism as a vital trait fostering resilience. Avoidance coping, despite its occasional association with negative outcomes, was viewed positively here by participants as a means of reducing exposure to stigma and misconceptions-a finding supported by [25,26] in the context of Ghanaian cancer patients. While participants viewed avoidance as protective, broader literature often critiques avoidance as counterproductive in resilience [27]. This suggests that the efficacy of avoidance coping may be context-dependent, influenced by cultural factors and individual perceptions of stigma and support.

Acceptance coping, where participants embraced their condition as a natural phenomenon, echoes findings of [28,29], who emphasize the role of acceptance in mitigating emotional distress during cancer treatment. However, some literature, such as that of [30], highlights that excessive avoidance can hinder emotional processing and long-term resilience, suggesting a potential area for further exploration.

### **Self-esteem**

Self-esteem emerged as a cornerstone for resilience, with participants citing strong inner voices and goal-setting as pivotal.

These findings resonate with studies by Campbell-Sills and colleagues [31]], which emphasize the role of self-motivation and personal agency in building resilience. The emphasis on setting new goals as a way to maintain focus and motivation is supported by the goal-setting theory of resilience [32].

While the study highlights self-esteem as a positive force, it contrasts with findings by Lim colleagues [33], who observed that individuals with lower self-esteem were more likely to experience prolonged emotional distress post-treatment. This divergence underscores the importance of understanding individual differences in resilience pathways.

### Confidence

Confidence, encompassing self-reliance, preparedness, and trust in healthcare practitioners, was also crucial. Participants' self-reliance aligns with [34] self-efficacy theory, which identifies belief in one's abilities as essential for overcoming adversity. Preparedness, as shaped by prior experiences such as menstrual pain, highlights the role of experiential learning in resilience building, corroborating findings of [35] on post-traumatic growth.

Confidence in healthcare practitioners was tied to perceived competence and empathy, echoing findings of [36,37], which emphasize the significance of trust in healthcare teams. However, this study's emphasis on cultural variance, such as reliance on healthcare practitioners' confidence, offers a fresh perspective that is less emphasized in Western-centric studies.

### Conclusion

In the absence of structured support systems, resilience in surviving breast cancer treatment is primarily shaped by individual personality traits such as hope, optimism, self-esteem, and confidence and emotional responses to the illness. While most findings resonate with prior studies, the positive framing of avoidance coping introduces a valuable area for further exploration, particularly in culturally diverse populations.

### Declarations

#### Ethics Approval and Consent to Participate

The Noguchi Memorial Institute for Medical Research Institutional Review Board at the University of Ghana (NMIMR-IRB CPN017/17-18) granted ethical approval for this study. All participants provided informed consent, and the research adhered to the relevant guidelines and regulations by Helsinki Declaration.

#### Consent for Publication

Not applicable.

#### Availability of Data and Materials

The datasets utilized and analyzed during this study can be obtained from the corresponding author upon reasonable request.

#### Conflict of Interest

The authors declare no conflicts of interest.

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### Authors' Contributions

All authors contributed to the conceptualization of the study. SG was responsible for data collection, and all authors participated in data analysis. SG drafted the manuscript, while LAO, and provided critical revisions. All authors reviewed and approved the final version of the manuscript.

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