

Developing Resilience in Managing Stress for Cancer Parents: A Clinical Study

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Abstract

Introduction: Parents of children, who are suffering from major illnesses, including cancer, go through a lot of worry and sorrow. There haven't been many randomized studies that have tested parent-specific psychological therapies.

Objectives: To ascertain if delivering a new interference called promote Resilience in Stress Management for Parents (PRISM-P) independently or in a group is more effective in improving parent-reported resilience than standard medical treatment.

Methods: The PRISM-P is a short, manualized interference that focus on four skills: goal surroundings, stress management, cognitive re-framing, and meaning-making. Every other week, for around 30 to 60 minutes, skills were individually taught to a single person in person for one-on-one delivery. In a single session with at least a pair of parents, the same abilities were taught while delivering instruction to a group of students. Patient-reported outcome questionnaires were completed by respondents at enrolment and three months. In the objective to treat residents, connections among every deliverance method and the main result and secondary outcomes at three months were assessed using linear regression modeling.

Results: 94 parents signed up in total, were assigned randomly to 1 of the 3 groups, and complete baseline questionnaires. The three groups' median ages ranged from 35 to 38, and the majority of the moms were Caucasian and college-educated. Their children ranged in age from 5 to 8 years, with males making up slightly more than half of the population. Leukemia or lymphoma was the most prevalent disease kind.

Conclusions: When compared to standard treatment, the delivery of PRISM-P one-on-one was strongly related with improvement in parent-reported outcomes for resilience and benefit discovery. There were no discernible connections amongst either platform and any other parent-reported consequences.

Keywords: resilience; cancer parents; stress; PRISM-P; clinical

1. Introduction

The development of resilience is a key component of anxiety management for parents of cancer patients' children. Resilience helps people to efficiently adjust to and deal with hardship, enabling them to keep their wellbeing and continue to assist their kid [1]. Significant levels of stress and worry are often experienced by parents of kids with harsh disease. The difficulties and obligations of raising a kid who has a severe disease may have a significant negative effect on parents' mental health. Uncertainty when it comes to their child's health, outlook, and available treatments, parents often experience a tremendous degree of uncertainty. Parents may experience ongoing concern and anxiety due to their child's illness's unpredictability [2]. Emotionally taxing a broad variety of strong emotions, including as despair, anxiety, shame, and helplessness, may be felt by parents. It may be emotionally draining for parents to see their children in agony yet unable to stop it. Financial difficulty serious diseases may need expensive hospital stays, prescription drugs, and specialist medical care. Financial problems and concerns about paying for these expenses are possible for parents, which increases their

stress [3]. Broken routines frequent hospital visits, medical treatments, and continuing medical supervision are often necessary while caring for a kid with a severe disease. These hiccups may make it difficult for parents to work, maintain friendships, and take care of their own needs. Social exclusion Due to the obligations of caring for their ailing kid, parents may find it difficult to participate in customary social activities. If their friends and extended family find it difficult to comprehend their particular circumstance, they could also feel alone [4]. It is the impression of stress that triggers a psychological reaction, not the actual stressor. Only psychosocial stresses and the allostatic reactions they cause will be taken into account for the duration of this evaluation. The allostatic processes combine subjective, often unconscious evaluation of a physical or psychological stimulus with neuronal and endocrine signalling, which activates the desired organs and causes an allostatic responses as depicted in Figure 1.

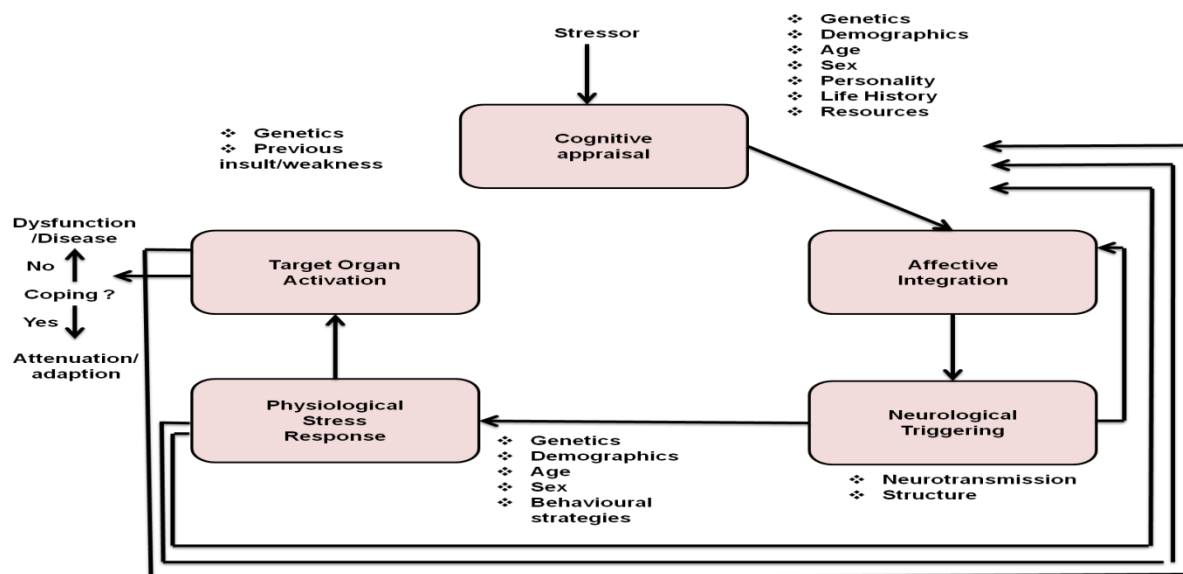


Figure 1: An integrated strategy to stress reactions

Managing my obligations In addition to caring for their ill kid, managing the needs of their other children, scheduling appointments, and managing domestic duties, parents often have to juggle a number of obligations. The continual juggling might make one feel stretched thin and overburdened. Caregiver exhaustion being a caregiver for a very sick kid may be demanding physically and mentally. Burnout and chronic exhaustion are two conditions that may affect parents and make them feel even worse [5]. In these circumstances, it is essential to provide parents resources and assistance. Healthcare experts, support groups, counselling services, and community organizations that focus on helping families with very sick children may all provide this assistance. The objective is to assist parents in controlling their stress, discovering coping mechanisms, and becoming connected to the essential support systems to deal with their difficult situations [6]. When cancer is diagnosed, there is often much dread and apprehension about the future. Patients could worry about their prognosis, the results of their treatments, and how these things would affect their quality of life. Overwhelming dread of the unknown may exist. Many other feelings, such as grief, fear, anger, frustration, and vulnerability, are often felt by cancer patients. It may be extremely draining to manage these feelings while going through the therapy procedure [7]. Significant physical side effects might result from cancer therapies such as chemotherapy, radiation therapy, or surgery. These adverse reactions, which include pain, exhaustion, nausea, hair loss, and changes in body image, may cause mental discomfort and have an influence on general wellbeing. A cancer diagnosis often results in losses, including modifications to daily schedules, job interruptions, financial difficulties, and modifications to relationships. In addition, patients may lament the loss of their prior level of health and of the life they had before receiving the diagnosis [8]. Family, friends, and romantic relationships may all suffer due to cancer. Patients may feel alone, misunderstood, or have changes in their social support systems. Due to treatment schedules or physical restrictions, social contacts may become more difficult. Patient may practice severe stress as a consequence of the expense of their cancer treatments, their medical bills, and prospective

financial obligations. The logistics of therapy including navigating insurance, work-related concerns, transportation, and other issues may further contribute to the emotional strain [9]. Access to oncology-specific mental health practitioners to assist patients in navigating their emotional issues and creating coping mechanisms. Patients who want to connect with others going through comparable circumstances might do so via support groups or counselling programs. Patients may better comprehend their diagnosis, treatment plan, and possible adverse effects with the use of educational tools and open communication from healthcare professionals. Using alternative treatments to reduce stress and foster emotional wellbeing, such as expressive art therapy, relaxation methods, and mindfulness exercises [10]. This clinical trial sought to determine how well an intervention program helped parents of children with cancer build resilience and manage their stress. Significant psychological and emotional difficulties that parents of children receiving cancer treatment must overcome might have a negative influence on their wellbeing. To properly handle the stress and uncertainty related to their child's diagnosis and treatment, parents must develop resilience.

2. Literature Review

The study [11] Resilience's effects and clinical ramifications on the cancer healing process. Using the keywords cancer, cancer patient, cancer survivor, resilience, posttraumatic growth, coping, social support, and distress, a literature search was carried out that was limited to PubMed from its establishment until May 2019. The resilience of cancer patients and, subsequently, positive psychological and treatment-related outcomes are influenced by biological, individual, and, most significantly, social variables. The study [12] investigated whether responses to promote flexibility in pressure managing varied diagonally significant Sociodemographic factors using information from a randomized clinical trial comparing it to Usual Care. Youth and little adult with disease complete patient reported outcome events of resilience, hope, promote finding, quality of life, and suffering at enrolment and at 6 months. Promoting Resilience in Stress Management was more beneficial to those who lived in less disadvantaged areas than it was to people who lived in more disadvantaged areas. The research [13] intends to investigate the important variables that influence oral cancer patients' degree of resilience. Between May 2016 and October 2017, researchers beginning the responsibility of Stomatology at Shengjing infirmary of China Medical campus and the Stomatology Hospital of China Medical campus conducted a multi-center cross-sectional study on Chinese patients with by word of mouth cancer. Chinese oral cancer patients showed a fair amount of fortitude. Higher levels of hope were favorably and substantially correlated with resilience, optimism, and education. The cancer diagnosis and treatment cause substantial psychological suffering in stomach cancer patients. The relationships between effective cope and flexibility in patients through stomach cancer are mediated by self-efficacy and hope. The simplify cope method survey, the General Self-Efficacy Scale, and the 14-Item flexibility level were all used to examine an entire of 253 stomach cancer patients prior to their first chemotherapy treatment [14]. The PubMed and CENTRAL databases were searched carefully and systematically for pertinent papers. The capacity for resilience is the capacity to sustain or quickly re-establish mental health through or after difficult life events. Major risk factors for stress-related mental disorders include cancer. Interested and motivated cancer patients should have access to interventions that foster resilience. When feasible, these treatments should last longer than 12 sessions and be given concurrently with somatic therapy as soon as the diagnosis is determined [15]. Although resilience has numerous beneficial impacts on cancer patients, little is known regarding the degree of resilience and its determinants in Chinese lung cancer patients receiving transarterial chemoembolization. A tertiary hospital in Shanghai, China was used to enrol 251 patients. Individuals underwent evaluation using the Connor-Davidson Resiliency Scale, Demographics and Disease-Related Information, and Kumpfer's resiliency paradigm [16]. In this research, psychological resilience in postoperative NSCLC patients will be examined, along with the variables that influence it, to determine its present status. In order to gather the 382 inpatients for this comprehensive longitudinal study from two Class A hospitals in Hunan, China, we employed a sampling method that was convenient. Medical Coping Modes Questionnaire (MCMQ), Connor-Davidson Resilience Scale (CD-RISC), Multidimensional Scale of Perceived Social Support (MSPSS), and Strategies employed by Peoples to Promote Health (SUPHH) were employed [17]. This research explores the connections between dyadic communicative resilience processes and communication effectiveness and relationship quality, as well as the consequences of health management and assessments of dyadic coping. Cancer patients (N = 312) and their

spouses (N = 272) are among the participants (N = 584). According to structural equation analyses, almost all of the interpersonal resilience processes are favorably predicted by enhanced communication efficacy for both patients and partners, and all processes are positively predicted by improved relational quality [18].

3. Methodology

3.1 Data set

In Seattle, Washington's Seattle Pediatrics Hospital, between December 2016 and December 2018, we carried out this segment 2, parallel, randomized clinical learn. For the execution of the trial and the release of the findings, researchers adhered to the CONSORT reporting requirements. Those who were eligible consisted parents or legal guardians of English-speaking children aged 2 to 24 who had been diagnosed with a innovative malevolent neoplasm one to ten weeks previous to employment, were undergoing cancer intended for therapy at Seattle junior sanatorium, and had given written informed permission, written assent, or verbal assent. Children under the age of 7 did not give their consent. All of the parents who took part gave their signed, informed permission. Only one parent per household was eligible in order to prevent interfamily correlation or data contamination. If there were many carers in a household, we asked them to choose the main tolerant being who would typically exist at the unwell youngster bedside. Following the completion of each survey, parents were given a \$25 gift card, for a whole of \$50 during the research.

3.2 Randomization and Recruitment

Clinics for outpatient treatment were used to address successive, qualified parents and their kids. Parents and kids gave their approval or assent after learning about the research, as stated above. Until at least 22 parents in each arm of the trial had finished it and described in Figure 2. This technique made it possible to compare each intervention arm to UC. Based on initial data that showed parent-reported resilience ratings had a mean (SD) of 31.9 (6.3), we were able to calculate our desired sample size. With 22 individuals and full data in each arm, there was a 80% probability to identify the smallest clinically meaningful dissimilarity in parent report resilience, where a minimum clinic central dissimilarity was defined as semi the SD23. Parents were randomly assigned to receive UC alone, UC plus individual PRISM-P (one-on-one), or UC plus group PRISM-P (group). Various-sized permuted blocks were used to build the randomization process. Due to the nature of the intervention, we were unable to blind individuals to the randomization status.

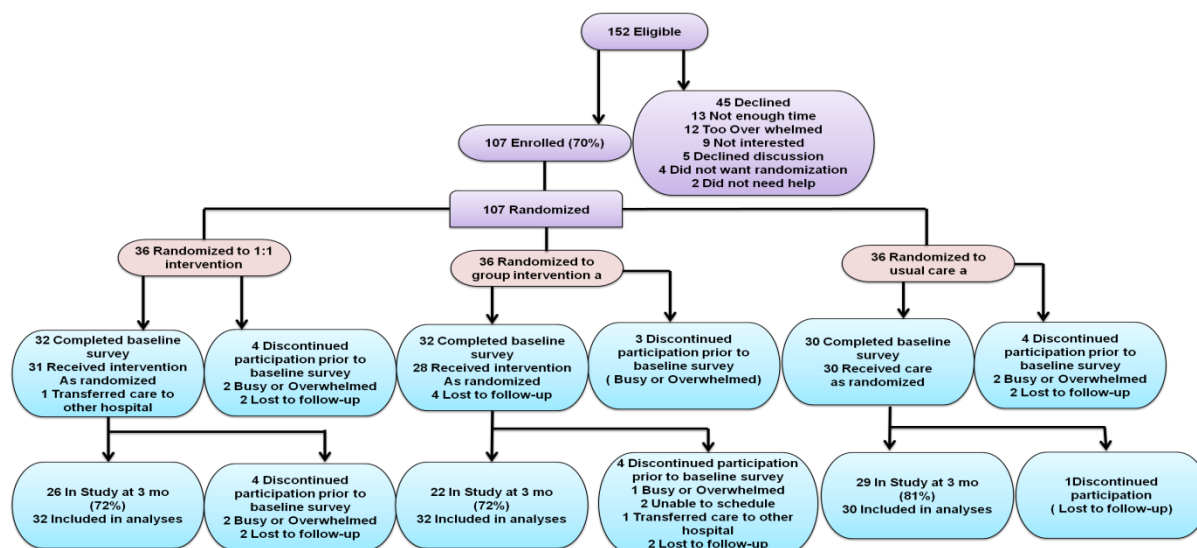


Figure 2. Flow Diagram CONSORT Study Enrolments and Retention

3.3 The PRISM Intervention

The PRISM is founded on the ideas of resilience, pressure and cope, and effective constructive psychology therapies that have been previously discussed. We adjusted cognitive behavioral therapy techniques for the

original AYA-directed version to provide a preventive, condensed skills-based instruction course that focuses on the four crucial resilience supplies listed. These tools included stress management techniques like mindfulness and relaxation exercises that help people comprehend pressures and sensations without also passing assessment; goal-setting strategies like "SMART" goal-setting and progress tracking; cognitive reframing techniques like learning to recognize depressing self-talk and reappreciating experience practically, if not hopefully; and benefit-finding techniques like movements that help people understand appreciation, meaning, and purpose in their lives. In addition to intermittent, quick booster visits from research personnel so that participants may practice their unique abilities between sessions, participants also get worksheets. To attempted the design software in which parents and offspring share comparable verbal communication and abilities to assist one another; the comfortable and skill reliable transversely the AYA and blood relation version to allow prospect application in ancestors system. The parent PRISM and AYA are both manually operated. According to parent preferences, 4 different sessions were organized for the one-on-one research arm every other week or so in combination with anticipated hospitalizations, ambulatory clinic visits, or telephone calls. There was a maximum of 60 minutes in each session. Both in-person and telephone deliveries of amplifiers were made. When a parent rescheduled or couldn't make it, they were asked to following meetings until they did, or until six months had passed since enrollment, whichever happened first. Attendees were encouraged to join an email list-serve with other members after the group session. Parents were asked to converse online ad lib among them while receiving boosters through group email. The identical scenario psychologist conducted both the individual and group sessions for PRISM-P. She had a minimum of 8 hours of identical exercise in PRISM-P script, which included role-playing make fun of one-on-one and cluster session, in accordance with our handbook. Audio was taken at every session. The faithfulness of all group sessions and one of five one-on-one meetings that were randomly chosen was evaluated.

4. Results and discussion

Out of 155 qualified parents, 110 (70%) participated and be randomly assigned to the one-on-one (n = 35), cluster (n = 33), or UC (n = 34) groups. Of these, 95 participants (n = 32 [89%] for the one-on-one, n = 32 [91%] for the cluster and n = 30 [83%] for the UC) completed baseline questionnaires. Participants in all three groups were mostly pallid marital moms with at smallest amount some college instruction, with a nucleus age of 35 to 38 (31-44) existence (interquartile range [IQR]). In all 3 groups, youngsters diagnosed with cancer had a median (IQR) age of 5 to 8 (3-14) years; somewhat additional than semi of the kids were males; and leukemia or lymphoma was the most frequent condition. Out of 154 qualified parents, 108 (70%) participated and were randomly assigned to the one-on-one (n = 35), group (n = 34), or UC (n = 36) groups. Of these, 95 participants (n = 30 [89%] for the one-on-one, n = 32 [91%] for the group, and n = 30 [83%] for the UC) completed baseline questionnaires. Participants in all three groups were mostly pallid married moms with at least some university edification, with a middle age of 35 to 38 (31-44) years (interquartile range [IQR]). In all three groups, youngsters diagnosed with cancer had a median (IQR) age of 5 to 8 (3-14) years; slightly more than half of the kids were males; and leukemia or lymphoma was the most frequent condition. Respondents who may have had less access to immediate resources such as money and social support be over represented in the collection who did not finish the three month questionnaires, and parents of kids with cancer did not finish the three month surveys nearly as frequently as additional parents. Participants in the group ranged in size from 2 (IQR) to 3, on average. In favor of parents in the one-on-one armrest, it took 116 (100-125) days; in the group arm, 104 (98-110) days; and in the UC arm, 98 (94-109) days. This nucleus (IQR) time from conscription to the completion of the three month examination was comparable transversely all group. The participants' unprocessed survey results for every group at all time point. Parent baseline instrument scores were lower for non-completing parents compared to other parents after the 3-month surveys.

4.1 One-on-One PRISM-P Delivery Compared With UC

One-on-One an individual intervention is given to a parent or caregiver of a child with cancer in the PRISM-P (Personal Resilience in Stress Management - Parent Version) delivery method. It entails individualized sessions between the parent and a qualified practitioner, such a psychologist or counsellor, with the goal of concentrating on resilience-building and stress-management connected to their child's cancer diagnosis and treatment.

Table 1: Participant and Child Characteristics based on highest education level

Highest education level		
	One-on-One Delivery of PRISM-Pb	Group Delivery of PRISM-Pc
<High School	4	1
High School	8	9
College/trade school	14	17
Graduate School	5	4
Other	1	2

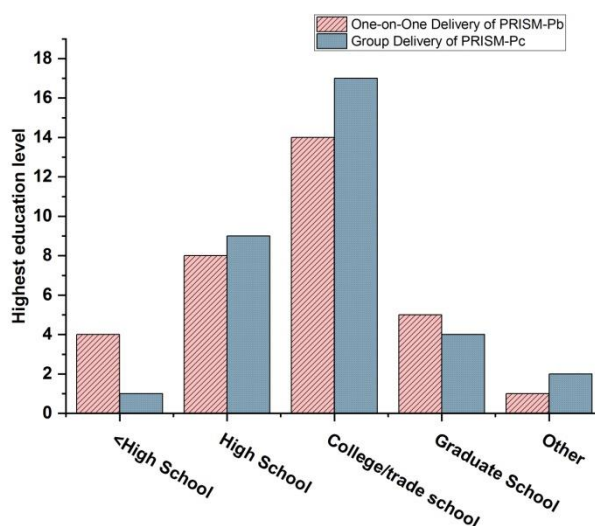


Figure 3: Comparison of Highest education level Characteristics

Table 2: Participant and Child Characteristics based on Race

Race		
	One-on-One Delivery of PRISM-Pb	Group Delivery of PRISM-Pc
White	18	23
Asian	3	3
African American	1	1
American Indian or Alaskan Native	1	3
Native Hawaiian Or Other Pacific Islander	2	1
Mixed/Other	7	1
No answer	2	1

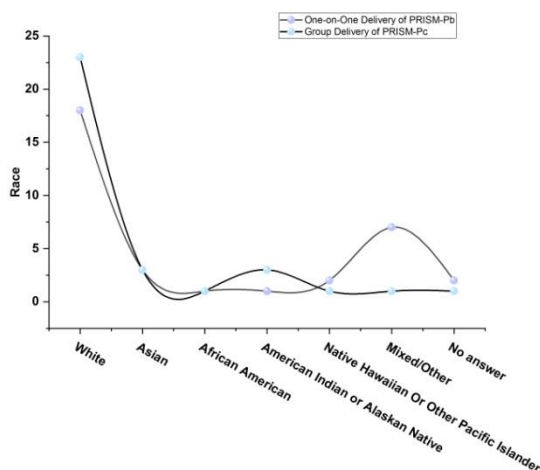


Figure 4: Comparison of Race Characteristics

Table 3: Participant and Child Characteristics based on Cancer

	Cancer	
	One-on-One Delivery of PRISM-Pb	Group Delivery of PRISM-Pc
Leukemia/lymphoma	18	15
CNS tumor	10	12
Non-CNS Solid tumor	4	7

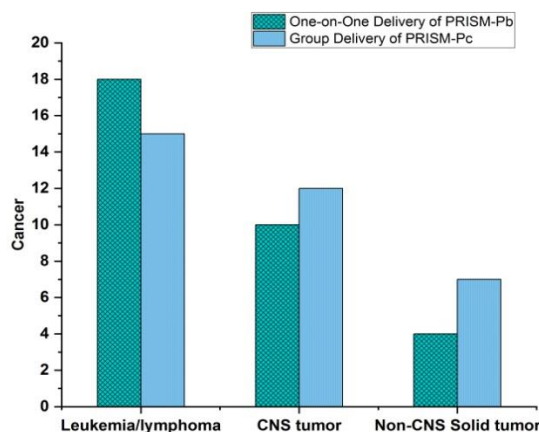


Figure 5: Comparison of cancer Characteristics

In comparison to parents who got UC, those who acknowledged one-on-one PRISM-P report greater resilience and benefit finding. Further outcome were not substantially correlated with PRISM-P. Parents who got UC and individuals who conventional collection PRISM-P obtained the same results. Parents and other caregivers are under a lot of stress when a child has a serious disease like cancer. Stress may have a detrimental impact on the family structure and the ability to assist the sick kid and healthy siblings. Untimely access to therapies to assist blood relation cope is advised as part of regular psychosocial care in Table 1 and Figure 3. In this stage 2 randomized clinical studies; we evaluated the effectiveness of PRISM-P, a new psychosocial interference created to increase parents' resilience, in comparison to standard psychosocial treatment using two different modes of delivery. Our objective was to ascertain if either one or both of the PRISM-P relief format made

parents of kids with recently discovered cancer experience supplementary resilient. Researchers discovered that the one-on-one delivery was linked to better parent reported resilience and advantage identification. Other resulting outcomes, such social support and life quality connected to one's health, were not found to change. In addition, PRISM-P focuses on options for resilience that are known to shield parents from cancer-related stress. They may need assistance navigating the inescapable changes in their lives brought on by severe childhood illness. Given that they felt supplementary flexible and saw additional benefits throughout their early cancer experiences, one-on-one PRISM-P participants may be protected from the cumulative difficulties of caring. Table 2 and Figure 4 might be explained by a number of factors, including the possibility to facilitate a meeting of parents who do not know one an additional can increase stress rather than reduce it, particularly if they feel under pressure to share personal experiences. In fact, the four parents who opted out of the research because they opposed randomization made it clear that they did not want to be put into a certain group. Nevertheless, grinding down was highest in this randomization arm, maybe because parents whose appointments were postponed started to lose interest or had trouble showing up. We had hoped for at least four parents in each cluster, but the average was just 2. A tiny turnout would have been disheartening to those anticipating larger crowds or put further pressure on parents to express their opinions. Unable to say if the outcomes would have been the same or different in bigger group sessions. The single delivery day may have hindered skill acquisition, to sum up. In conclusion, not only was a one day session with more than one parent present less practical, but also seemed take away successful. Table 3 and Figure 5 describe the social support and quality of life is not specifically addressed by PRISM-P, we anticipated that stress and distress would be more affected. Because parent distress during paediatric cancer is linked to unfortunate feature of life, physical comorbidities, and matrimonial purpose, it is crucial to address this issue.

Table 4: Achievements for each participant at Baseline and 3 Months

Survey Instrument	Mean (SD) Score								
	Mean (SD) Score One-on-One Delivery of PRISM-P ^b			Group Delivery of PRISM-P ^c Usual Care ^d			All		
	3 mo	Change	Baseline	3 mo	Change	Baseline	3 mo	Change	Baseline
Hope Scale, total score	54	2	53	50	-3	50	52	-3	53
MOS social support survey, total score	4.3	-0.4	4.4	3.9	-0.5	4.1	4.2	-0.5	4.3
Benefit Finding Scale	4.2	0.6	3.8	3.5	0.5	3.3	3.8	0.4	3.6
No. of participants	28	28	34	24	24	34	79	79	96
10-Item Connor-Davidson Resilience Scale	31	3	30	28	-3	29	30	-3	30
HRQOL per MOS SF-36									
Perceived Stress Scale	66	2	63	66	-3	67	66	-4	67
Kessler Psychological	19	-2	23	21	-4	24	23	-5	24

Distress Scale									
Pain	74	12	61	68	9	65	69	10	61
General health	88	6	79	72	-9	79	81	-3	80
Social functioning	68	9	60	62	5	59	63	6	59
Role limitations due to emotional problems	79	22	61	58	-2	56	64	12	54
Emotional well-being	43	7	36	41	-2	39	41	.3	39
Physical functioning	95	-3	93	90	-5	90	92	-4	90
Role limitations due to physical health	88	6	81	76	10	65	79	7	71

When a child is diagnosed, parent anguish usually peaks, and then stabilizes 3 to 6 months later at a new normal and its shown in Table 4. Longer-term results may be predicted by either positive or bad psychosocial performance in this presently time period.⁵⁰ Therefore, we think it's crucial to make interventions that might change these trajectories for the better. Future versions of PRISM-P must determine if and how to concentrate specifically on reducing distress. It is challenging to provide psychological therapy to parents while conducting research or providing therapeutic care. Few parent-specific therapies have been developed to date, and even fewer have been effectively used before a child develops cancer. Many parents are unable to continue counselling because they are worried concerning parting their youngster bedside to concentrate on their individual health. The delivery of early intervention has mostly failed due to these causes. As a result, it freed families with greater requirements from hiring professional psychosocial assistance. By having a single doctoral-level psychologist conduct every PRISM-P session in the current trial, we were able to reduce any possible variation in interventionist expertise. Even though this increases the interior legitimacy of our consequence, it also has limitations since it is unknown if we would see the same results from interventionists with less experience.

5. Conclusion

When administered one-on-one to parents of children diagnosed with cancer, the PRISM-P intervention was shown to have a beneficial impact on the parents' self report resilience and advantage result. These results provide light on an essential objective in the field of caregivers supported PRISM-P might assist in making parents experience additional resilient, which, in revolve, may enhance their capacity to continue providing care for their kid. These results highlight the need of offering parents of children with cancer specialized assistance and interventions. Healthcare practitioners may make an important difference in the wellbeing and quality of life of parents who are experiencing extreme stress and uncertainty by addressing their specific needs and providing them with skills that will help them develop resilience. It is important to understand that parenting a kid with cancer is a complex and continuing process. It is necessary to do further study to examine the sustainability and long-term impacts of therapies that promote resilience in this group. By furthering research into the elements that influence parental resilience and creating evidence-based solutions.

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