

Supportive Psychotherapy for Healthcare Professionals in The Management of Acute Coronary Syndrome: The Use of Delphi Technique

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ABSTRACT

Background. Supportive psychotherapy (SP) may increase the benefit of acute coronary syndrome (ACS) management, but there is no structured SP as a guideline for healthcare professionals. This study aimed to develop structured SP as a guideline for implementing psychotherapy in the management of ACS patients in intensive cardiac care unit (ICCU). **Methods.** This qualitative study used Delphi technique as a modified Delphi method to reach a consensus among experts of structured SP for healthcare professionals in the management of ACS during hospitalized in ICCU. This was developed using self-reflection, observation, and interview of SP implementation in daily psychosomatic practice, gathering literature reviews, doing focus group discussion (FGD) and interview with ACS survivors. During the Delphi rounds, we interviewed 50 informants as source people using valid questionnaires, to proceed a draft of the SP framework and the structured sessions. The SP framework draft and the structured sessions were evaluated and corrected by experts anonymously until the consensus was reached. The validity of the consensus was tested, using Likert psychometric scale to reach an agreement. Cronbach alpha test was used to assess construct validity with SPSS 20. **Results.** All of preparations conducted before the Delphi rounds showed that ACS patients had psychosomatic disorders during in ICCU, that required support. SP is very helpful to reduce the negative impact of this disorders. Off 50 informants answered a valid and reliable questionnaire which supports the above statement. The draft was made based on the above process. The development of SP for healthcare

professionals of ACS managements was reached in a consensus of expert panelists in the second round of the Delphi with Cronbach alpha of 0.9. **Conclusion:** Supportive psychotherapy (SP) for healthcare professionals in the management of ACS in ICCU were developed and may be applied in clinical practice and research.

Keywords: Acute coronary syndrome, Delphi technique, Psychotherapy.

INTRODUCTION

Acute coronary syndrome (ACS) causes disability, reduced productivity, which results in a global economic burden.¹ Acute coronary syndrome as part of coronary heart disease (CHD) is a syndrome with symptoms that include mainly chest pain due to atherosclerosis and/or acute thrombosis.

The role of psychological or stress factors in CHD and ACS has been widely researched. The INTERHEART study on 25,000 subjects from 52 countries found a relationship between chronic stressors and the incidence of myocardial infarction which could be prevented and improved.² Other studies also showed the negative impact of psychological injury in patients with CHD or ACS.^{3,4}

This does not only occur during hospitalization, but also continues after hospitalization. This injury increases morbidity, mortality, and disabilities as well as decreases quality of life.⁵⁻⁹ Advances in management of ACS have succeeded in reducing complications and mortality rates. Non-pharmacological therapeutic approaches such as psychotherapy should be an integral part of management to achieve optimal treatment. Psychotherapy can reduce the onset of psychological symptoms, accelerate healing, shorten the length of stay, reduce morbidity and mortality, and improve the patient quality of life.¹⁰⁻¹² A reviews and meta-analyses conducted in post-ACS patients or CHD patients also showed the benefit of psychotherapy.¹³

However, there are only several studies on supportive psychotherapy (SP) conducted in ACS patients during intensive care. Gruen¹⁴ in 1975 began psychotherapy on the first or second day for 5 days a week in intensive cardiac care unit (ICCU), then continued in non-intensive ward. On the other hand, Roncella¹⁵ started a combination of individual and group

psychotherapy one week after primary cardiac intervention (PCI) for 3 months, and the outcome was assessed within one year. Yet, until now there has not been a structured SP for healthcare professionals in the management of ACS. Hence, this study aimed to develop a structured SP for healthcare professionals to manage ACS patients during hospitalized in ICCU

METHODS

This study is a part of randomized clinical trial (RCT) study using structured SP supplementing treatment ACS patients while in ICCU and assessing regulation of psycho-neuro-immuno-endocrine (PNIE).

This qualitative study which used Delphi technique as a modified Delphi method to reach a consensus from experts to develop structured SP for healthcare professionals to treat ACS patients during hospitalized in ICCU. Delphi method is an established method for reaching consensus among experts and practitioners and can be viewed as the standard method used in the health care and nursing sector.¹⁶

The study process occurred between January-April 2021, and the research was conducted at Integrated Cardiac Services, Cipto Mangunkusumo National Hospital, Jakarta, Indonesia.

Most interviews and or communications used one or more internet-based media, such as zoom, email, WhatsApp, google form, related to global COVID-19 pandemic.

Ethics Statement

The studies were reviewed and approved by The Ethics Committee of the Faculty of Medicine of Universitas Indonesia. Written informed consent to participate in this study was provided by the participants. Nomor: KET-425/UN2F1/ETIK/PPM.00.02/2020.

Preparing the SP Draft

The steps for preparing the SP framework draft and the structured sessions were conducted before Delphi rounds, and those were including:

Self-reflection

Self-reflection of what had been done in the psychosomatic clinic related to the SP application.

Self-reflection is a process of looking back on the experiences that have been undertaken to be able to draw lessons learned for myself and followed by the preparation of an action plan to do better.¹⁷

Self-reflection can be part of a research method to give better results or even a single-method used in qualitative research.¹⁸

The Literature Study Aims to Explore Psychotherapy, CHD, ACS and PNIE

Literature search was done through keywords: superficial psychotherapy OR supportive psychotherapy AND acute coronary syndrome AND effect psychoneuroimmunoendocrine AND during hospitalize, through Cochrane, Emerald Insight, EBSCOhost, Google Scholar, JSTOR, Pubmed, and Scopus There were no specific articles found. Then, literature

search conducted via Google regarding review material, and arranged according to the topic study on psychotherapy in ACS, PNIE and the relationship between psychotherapy and cerebral neuroplasticity, English language, without limited period of publications.

Observation of implementation of SP twelve times in a month and interview of SP implementation in psychosomatic clinic of internal medicine were done with open questions.

Interviews of “ICCU doctors and nurses “related to SP for healthcare professionals in the management of ACS, were done using open questions.

Focus group discussion (FGD) were done with ACS survivors via zoom. FGD were done to find out ACS patients about their feelings, emotional problems, psychosomatic disorders and also to find out what they need for SP during hospitalization in ICCU. Interview of survivors conducted during FGD using questionnaires.

Based on the above process, the questionnaire related to the topics and materials was created as an instrument to collect opinions from the Informant as a source person.

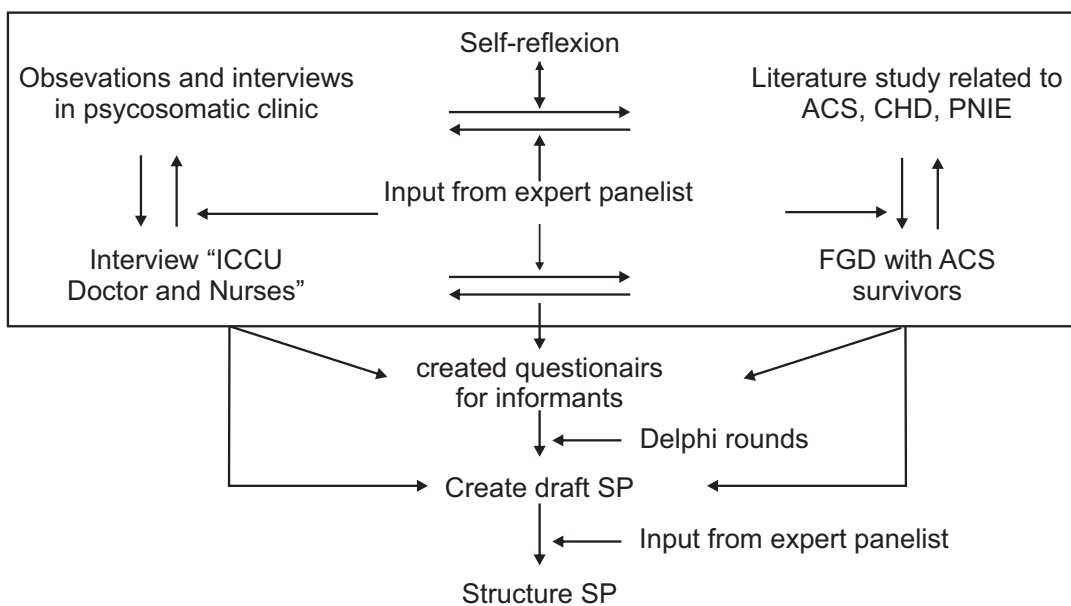


Figure 1. The conceptual framework flowchart.

The diagram below describes the flowchart conceptual framework. (**Figure 1**)

Delphi Methods

The First Round of Delphi

Collection of informants' opinions, with the questionnaires were done. The questionnaires were sent via *google form* to the informant as source person two times in the period of up to two weeks.

This study uses 50 informants, which consists of physicians or nurses who cared ACS patient and/ or SP services, each were competent in one or more the field of psychosomatic, cardiovascular, endocrine, immunology, psychiatry, clinical psychology, psychotherapist and internal medicine. Selection of informants were done by convenient sampling to those who are working or have worked in ICCU or understand problems related to ACS disease. Most informants work at Cipto Mangunkusumo Hospital as a tertiary hospital, and each one from Department of Community Medicine Faculty of Medicine Universitas Indonesia Jakarta, Faculty of Psychology Universitas Gadjah Mada, Jogjakarta, Psychosomatic Division Department of Internal Medicine Faculty of Medicine Universitas Syiah Kuala Banda Aceh, Indonesia.

Collected material was used for the draft of structured SP framework and SP sessions.

We recruited 10 expert panelists to assess SP framework draft and the structured sessions as an SP for professional healthcare in management of ACS. The expert panelists have more than 10 years of experience in some fields, such as internists- consultant of cardiovascular, internists-consultant of psychosomatic, psychiatrists-consultant, internists-consultant of endocrine, metabolism, and diabetes, internists- consultant of clinical immunology and allergy, internists-consultant-geriatric, psychiatric-consultant (psychotherapist), clinical psychologist-consultant and community medicine specialist-consultant.

SP framework draft and sessions were structured and sent to the expert panelists via *googleform* to assess the eligibility, give input,

and provide corrections to improve it until the SP framework and structured SP sessions were compiled.

The Second Round of Delphi

The second round of Delphi, the SP framework and structured sessions were sent via *google form* to the expert panelists to assess the eligibility using a Likert scale rating with score of 1-6 (1: unnecessary, 2: less necessary, 3: may be necessary, 4: almost necessary, 5: necessary, 6: very necessary) and to write comments for each component if necessary.

The agreement was reached if $\geq 80\%$ of expert panelists gave the score of ≥ 4 , the statement would be included for the SP framework and structured sessions, and if $<80\%$ of the expert panelists gave a score of ≤ 4 to a statement, the statement would be re-entered in the next Delphi round, accompanied by an attachment to the previous response as a basis for the expert panelists to reconsider the existing decision, until an agreement was reached.

Data Management and Statistical Analysis

Self-reflection, literature study, Observations and interview in psychosomatic clinic of internal medicine. Interview of the doctors and nurses in ICCU related to SP, Interview and FGD with ACS survivors would be report as a brief narrative.

Descriptive data is used to describe the demographic characteristics of the informants and expert panelists. Categorical data will be reported in the form of frequency (n) and proportion (%), and numerical data as a mean and SD. The face validity test for each statement of informant was tested using percent index and the reliability test using the Spearman-Brown coefficient. Data analysis was done using SPSS 20 version.

RESULTS

Self Reflection

Researcher has been working in the field of psychosomatic, internal medicine for more than 25 years. Self-reflection focus on psychotherapy gave the idea that SP is an

important aspect considering the psychosomatic therapy to all psychosomatic patients who were receiving holistic management. there was no structured SP that can be used as a guide for healthcare professionals, although SP is often discussed and used in daily practice in psychosomatic clinics. It has been encouraged to conduct research on SP related to psychosomatic patients to prove that SP is a therapy that can improve psychosomatic disorders scientifically. The SP can improve psychic and somatic functions related to psychophysiology and improving PNIE regulation. It would convince Healthcare professionals, doctors, especially those who work in the medical field (focusing more on the somatic aspect) in becoming more concerned about the psychological aspects and establishing better collaboration for the optimal benefit.

Study Literature of Psychotherapy in ACS Patients.

The results of the literature study could be concluded as follows:

ACS patients are patients with acute medical conditions that require immediate help. So far, medical assistance has focused more on somatic problems. Somatic medical treatment has succeeded in reducing the number of complications, morbidity and mortality in line with developments of cardiovascular drugs and technology. However, the results would be better, if it is combined and integrated with psychotherapy. It has been proven from many studies that psychotherapy works in synergy with pharmacological treatment, and may reduce complications, morbidity, mortality and also increase quality of life during and after hospitalization.

Stressors has been proven to have a role in the course of the disease and the incidence of ACS complications both during and after acute treatment at the ICCU.

SP during acute care at the ICCU has not been widely studied. Gruen (1975) has been conducted unstructured psychotherapy on the first day or the second day for 5 days a week to ACS patients at the ICCU, then continued in the ward. Another study by Roncella, where

psychotherapy interventions were started on patients 1 week after PCI and were combined with individual psychotherapy, then followed by group psychotherapy for a long period of approximately 3 months, and the outcome was seen within one year. Both studies gave positive result.

Gruen's research is almost the same as the research that will be carried out in this study. Gruen started psychotherapy for ACS patients, but in Gruen's study, psychotherapy was carried out until the patient was discharged from the ICCU and continued in the regular ward until the patient went home between 11 and 22 days, which means the psychotherapy dose was different between patients. The outcome of psychotherapy interventions in Gruen's nor Roncella's studies involved PNIE. Currently, a structured SP has not been compiled as a guideline for healthcare professionals to manage ACS patients during hospitalization in ICCU.

Observation and Interview of SP Implementation in Psychosomatic Clinic of Internal Medicine Observations

Observations for 3 months gave the idea that SP is often given to psychosomatic patients such as ventilation, suggestion, guidance and reassurance as well as a spiritual approach, which involves cognitive function to improve emotional disturbance to reduce psychic and somatic symptoms. The results of SP administration were better when given together with oral medicine. However, SP, either separately or simultaneously with the use of medicine, has never been studied in psychosomatic patients or with certain medical conditions such as ACS. SP has also not been given in a structured manner, which is important to do research to assess its effectiveness consistently.

Interview

The concept of managing psychosomatic disorders is through a biopsychosocial-spiritual approach. One of the therapies that the researcher often does is supportive psychotherapy. Psychotherapy is one of the treatments that has an important role in patients with

psychosomatic disorders in addition to giving psychopharmacology. Psychotherapy is useful in improving and accelerating healing in patients with psychosomatic disorders. Encouraging patients to recognize themselves and their pain. Psychotherapy itself consists of ventilation, reassurance, support and others. Supportive psychotherapy can be carried out by all doctors, who have undergone training to suit the goals of supportive psychotherapy. In the psychosomatic polyclinic of Internal Medicine, SP is provided for all patients, while a small number of patients received deeper psychotherapy including cognitive behavioral therapy (CBT).

Interviews of "ICCU Doctors and Nurses "

Most ACS patients experience emotional disturbances, there are psychological and somatic problems, anxiety and depression. Anxiety or worry, fear of death related to the disease, related to the ICCU room and anxious about PCI and the condition of the disease. It needs explanation, psychological support, and needs SP either by a

doctor or nurse.

FGD and Interview with ACS Survivor

There were 50 participants during FGD, and 30 of them were ACS survivors. Some of them are ACS survivors who took part in the post-ACS rehabilitation program organized by cardiac rehabilitation team of Integrated Cardiac Services, Cipto Mangunkusumo National Hospital, Jakarta, Indonesia.

The FGD clarified that during ACS treatment in ICCU, they need support from doctors, nurses, family and friends as early as possible. The need for a doctor related to psychological disorders is very necessary, may be a psychosomatic doctor, psychiatrist or psychologist, who can overcome the trauma that occurs during treatment. In fact, this condition persists after treatment and is helped by the group managed by PJT and the Medical Rehabilitation Team. Some patients feel traumatized, despairing over what happened to them for more than a year. Interview of

Table 1. Characteristics of the Informants.

Variables	N=50
Age (years) mean (SD)	41.74 (11.36)
Sex	
Male.	27
Female.	23
Education,	
Doctoral degree	9
Consultant	5
Master degree	9
Bachelor degree	23
Associate degree	4
Occupation	
Medical doctor	37
Clinical psychologist	1
Nurse	12
Types of occupation/profession	
Internist-consultant of psychosomatic	2
Internist-consultant of cardiovascular	4
Internist-consultant of endocrine metabolic, and diabetes	1
Internist-consultant of allergy and immunology	1
Internist-consultant of geriatric	1
Psychiatrist-consultant	3
Clinical psychologist-consultant	1
Community Medicine Specialist- Consultant.	1
Resident of internal medicine with subspeciality in cardiovascular	4
Resident of internal medicine with subspeciality in psychosomatic	3
Internist	2
Resident of internal medicine	15
ICCU nurse	6
ICCU ex-nurse	5
Ward nurse	1

ACS survivors conducted during FGD using questionnaires.

The Informants Characteristics and Opinions

The characteristics of the informants were as follows: a mean age of 41.74 (SD±11.36) years old, the male and female ratio almost equal, most participants with an education level of bachelor's degree, all health professionals, mostly doctors (**Table 1**).

All informants answered 19 statements in

the questionnaire (Q) (**Table 2**). Face validity test for each question was between 88%-100% which means the items had good validity. Reliability test with test-retest reliability through the Spearman-Brown coefficient for each statement is above 0.90.

From 19 statements, almost all of them answered yes or agreed, except for Q7, 22% answered no. However, suggestions were given as needed. Some who agreed also gave the same advice. Q11, SP in ACS.

Table 2. Proportion of Statement Agreement of the Informants Questionnaire

No	Statement	Yes	%	No	%	Annotations/Comments
1.	Patient with heart attack such as acute coronary syndrome (ACS) will experience emotional disturbance, anxiety, restlessness, and fear mixed with sadness	50	100	0	0	
2.	Empathic accompaniment and support during intensive care are urgently needed by ACS patients	50	100	0	0	
3.	Supportive Psychotherapy (SP) as a form of psychological support is needed by ACS patients during intensive care.	50	100	0	0	
4.	SP is a non-pharmacological therapy that is needed by ACS patients during intensive care.	49	98	1	2	
5.	SP can be useful, synergistic, and complementary to the current existing standard therapy.	49	98	1	2	
6.	The core parts of SP needed for ACS patients are ventilation, suggestion, and reassurance SP.	48	96	2	4	
7.	The core parts of SP which are needed for ACS patients, should be given simultaneously at each SP session.	39	78	11	22	Types of SP given are according to the needs.
8.	Psychoeducation, which is given to ACS patients, complements SP for emotional improvement.	48	96	2	4	
9.	Spiritual support, namely greeting during the opening and prayer with the patient completes SP, which is given to ACS patients complement SP for emotional improvement	49	98	1	2	
10.	SP on ACS patients can be started on the first day of treatment after the patient is stable with the standard treatment given.	49	98	1	2	
11.	SP on ACS patients can be done every day for 5 consecutive days, with one session per day	39	78	11	22	Depend on patient's condition
12.	SP in ACS patients can be given within 30 minutes to 60 minutes in each session.	45	90	5	10	The suggestion 15-45 minutes or 20-40 minutes enough, and 30 minutes maximum. While the mean tries out .30minutes
13.	SP will be useful in improving psychosomatic function.	49	98	1	2	
14.	SP will be useful in improving the dysregulatory function of psycho-neuro-immuno-endocrine (PNIE) function in ACS patients.	49	98	1	2	
15.	SP will be useful in improving the emotions of ACS patients.	50	100	0	0	
16.	SP will be useful in improving the symptoms of anxiety and depression in ACS patients.	50	100	0	0	
17.	SP will be useful in improving the autonomic nerves function of ACS patients	50	100	0	0	
18.	SP will be useful in improving the immune system function of ACS patients.	49	98	1	2	
19.	SP will be useful in improving the endocrine function of ACS patients.	48	96	2	4	

Patients can be given every day for 5 consecutive days, with the provision of one session per day. 78% agree that SP should be given for 5 consecutive days. Q12, SP in ACS patients can be given for the duration of 30 minutes to 60 minutes per session. Some informants suggest that the duration of SP should be around 20-40 minutes, 15-45 minutes or maximum 30 minutes, and the trial mean time was 30 minutes.

The characteristics of expert panelists were shown in **Table 3**.

All expert panelist level educations have doctoral or consultant of healthcare professionals related to research topic. The results of the statements SP framework by expert panelists. (**Table 4**). The expert panelists who agree with the statements related structured SP sessions. (**Table 5**)

Structured SP sessions consensus as a guideline for health care professional to manage ACS patients have been reached by expert panelists in the second round of Delphi could be seen in Attachment.

Table 3. The Expert Panelists Demographic Characteristic.

Variables	N=10
Age (years) mean (SD)	58.30 (7.30)
Sex	
Male	6
Female	4
Education,	
Doctoral degree	7
Consultant	3
Occupation/profession	
Internist-consultant of psychosomatic	1
Internist-consultant of cardiovascular	1
Internist-consultant of endocrine metabolic, and diabetes	1
Internist-consultant of allergy and immunology	1
Internist-consultant of geriatric	1
Psychiatrist-consultant	3
Clinical psychologist-consultant	1
Community medicine specialist- consultant	1

Table 4. Proportion of Panelist Agreement of Framework SP Statements Base on Lickert Score.

No	Statements	LS 6	LS 5	LS 4	LS 3	LS 2	LS 1	Agreement \geq 4, N (%)
1	Greet in a friendly manner, introduce yourself to the patient	9	1	0	0	0	0	10 (100)
2	Ensuring matters relating to the identity of the patient	8	2	0	0	0	0	10 (100)
3	Explain the aim and purpose of the meeting	8	2	0	0	0	0	10 (100)
4	Asking about problems and, asking the patient to express his feelings today	6	4	0	0	0	0	10 (100)
5	Provide support according to patient needs	6	4	0	0	0	0	10 (100)
6	The doctor analyzes the functioning ability of the patient's ego	3	5	0	2	0	0	8 (80)
7	Convince the patient of his ability to deal with problems that arise	5	5	0	0	0	0	10 (100)
8	Ask family members, friends who care about the patient's problems	3	6	1	0	0	0	10 (100)

9	Provide education and understanding regarding patient problems both psychologically or somatically	6	4	0	0	0	0	10 (100)
10	Ask about comfort, conditions, and constraints that exist.	4	5	1	0	0	0	10 (100)
11	Provide support to the patient in dealing with current and future problems.	5	5	0	0	0	0	10 (100)
12	Ask if there is still anything to say regarding the patient's problem	5	4	1	0	0	0	10 (100)
13	Provide support in accordance with the problems described by the patient.	5	5	0	0	0	0	10 (100)
14	Summarize the meeting's results	6	4	0	0	0	0	10 (100)
15.	Pray for each other's health, and end the meeting	5	4	0	0	0	1	10 (100)

LS: Lickert Score. (1: unnecessary, 2: less necessary, 3: may be necessary, 4: almost necessary, 5: necessary, 6: very necessary). N: number of expert panelist

Table 5. The Expert Panelists Who Agree of The Statements of SP Sessions.

SP session	Total Statement	100% Agree N 10	90% Agree N 10	80% Agree N 10	<80% Agree N 10
SP. Session1	15	6	8	1	0
SP. Session2	15	10	4	1	0
SP. Session3	15	15	0	0	0
SP. Session4	11	11	0	0	0
SP. Session5	15	14	1	0	0

It could be seen that the results of the assessment of 10 expert panelists in the second round had reached an agreement.

DISCUSSION

All prepared resources related to SP structure for healthcare professionals in the management of ACS patients were supported this study.

Delphi method has often been used in extensive health-related studies and can produce an adequate level of evidence-based medicine,¹⁹ that is a reliable and creative method for exploring ideas to reach a consensus among experts.²⁰⁻²² The expert panel did not interact directly with each other to avoid social interaction bias, but they are made aware of the group responses and change their views, leading the expert panel towards group consensus.^{20,26}

This study uses Delphi technique as a modified Delphi method that is generally accepted to collect information in the first of

Delphi using informant questionnaires based on literature reviews and other necessary source.²³⁻²⁵ to prepare the draft SP framework and structured Sessions and to reach a consensus of "expert" opinion.²⁶⁻²⁸

Informants who meet the representatives of the expertise group according to the topic will increase the validity of the results.²⁹⁻³²

The number of informants depends on the topic as well as the time and resources available with varying amounts.³¹⁻³³ There are 50 informants, including 10 expert panelists, and more than 30 informants are considered to be a large and adequate number.³³ Even though online survey response rate is usually lower than paper-based surveys³⁰, this study response rate was 100%. This may indicate a representative sample target population and reduced non-responder bias.³⁴⁻³⁵

From 19 statements, almost all of the informants agreed. It means that the statement may be taken as a representative material that includes structured SP sessions as the aim of

this study. Patients with ACS will experience anxiety and worry accompanied by sadness and emotional disturbances, and these were evidenced by several other studies,³⁶⁻⁴⁰ which require adaptation.⁴¹

This condition can have a negative impact or short-term or long-term complications through various pathophysiological mechanisms⁴²⁻⁵⁴ that require empathic accompaniment and require SP to quicken adaptation, strengthen coping mechanisms, facilitate healing and reduce complications.⁵⁵⁻⁶⁰

Q7 is related to the type and strategy of SP intervention, and is based on the goals, socio-cultural and clinical background of the patient. The type and technique used to provide SP can also vary, from the length (duration), the time interval for the next meeting, to the assessment of the outcomes that occur.⁶¹⁻⁶³

SP is a non-pharmacological therapy, synergizing and in-line with and complementing the standard.

ACS treatment. Types of SP include venting, suggestion, reassurance, encouragement, praise persuasion, rationalizing and reframing, also with education and spiritual support to complement SP in correcting existing psychological or emotional disorders, in a way that is compatible to the patient.^{14,64}

Q11 and Q12 are both related to SP durations and sessions, and it can be brief and intensive psychotherapy, which is related to the fact that short and intensive psychotherapy can give good results. Patients are more tolerant, and it is easier to get insurance coverage, especially in primary services.⁶⁵⁻⁶⁷

The meaning of short psychotherapy is relative and varies, but in simple terms, short psychotherapy can mean doing psychotherapy in a short time, as it can only be 15 minutes^{57/60} or with as few sessions as possible which can already overcome the patient's condition, and it does not exceed the need even if it is only one session.⁶⁸

There is also a definition that brief psychotherapy is generally carried out in fewer than 8 sessions, which is different from standard psychotherapy which is usually carried out between 8 and 12 sessions in depressed patients.

In critical studies and meta-analyses, depressed patients require 6- 8 sessions of psychotherapy to obtain good results.⁶⁹

Some even do psychotherapy with a combination of exposure, participant modelling, cognitive challenges, and reinforcement with a maximum duration of 3 hours in patients with specific phobias, such as social phobia, with just one session to obtain effective results.⁷⁰

One-session psychotherapy is also effective in patients with multiple specific phobias accompanied by other anxieties.⁷¹

Intensive psychotherapy can mean giving psychotherapy every day,^{72,73} and it can also mean providing deep psychotherapy by exploring various things that are the patient's problems both new and old to improve the patient's emotions, this meaning gives a contrasting impression with the meaning of SP which focuses only on patients and current problem solutions.^{74,75} Therefore, it is very possible to use SP every day in a short duration in acute conditions such as in ACS patients. Ehler et al.⁷⁶ reported that daily cognitive psychotherapy for 7 consecutive days in PTSD was as effective as 3 months of weekly psychotherapy to reduce symptoms of anxiety and depression as well as improve quality of life.

Based on the explanation above, SP can be given in 5 consecutive sessions with the duration of each session ranging from 15 to 45 minutes for the implementation of a structured SP in ACS patients while still observing the patient condition.

SP can improve patient's psychosomatic function, emotional conditions, and reduce anxiety and depression symptoms through PNIE regulation.

The physiological mechanism of the brain and body relationship illustrates that there is a strong relationship between the magnitudes of disturbances in the brain, in this case emotions and thoughts, and their effects on the body. They will communicate with each other and send signals that produce biological changes (somatic) and physiological processes, which can improve a person health status, and PNIE clarifies its psycho-physio-pathological mechanisms.⁷⁷⁻⁸¹ Buchheim et. al.⁸² in a study

of psychotherapy in depressed patients found an improvement in the limbic system, the left anterior hippocampus (amygdala), subgenual cingulate, and medial prefrontal cortex which initially experienced activation, followed by the activation subsiding along with a reduction in depressive symptoms. This is an important study that shows psychotherapy improvements in the limbic system pathway or circuit which is an important emotional pathway that is then related to the HPA pathway.⁸³ From a clinical study conducted by Holzel et. al.⁸³, it was found that there was a change in the gray matter density of the brain region that is involved in emotion regulation, causing changes in neuroplasticity and immuno-endocrine returned to physiological capacity.⁸⁴ Imaging clinical studies in major depression have shown that the administration of CBT affects the clinical recovery of the limbic and cortical areas including the frontal, cingulate and hippocampus areas as well as the use of antidepressants.⁴³ There is also evidence that psychotherapy can improve the uptake and metabolism of neurotransmitters, especially serotonin^{85,86} Research by Joffe et. al.⁸⁷ found an increase in T4 in depressed patients who responded to cognitive and behavioral psychotherapy, while those who did not respond had a decrease in T4. This proves that psychotherapy, besides being able to improve psychosomatic symptoms, can also affect the hormonal axis such as the hypothalamic pituitary thyroid (HPT) axis, as well as another hormonal axis such as the hypothalamic pituitary adrenal (HPA) axis.⁸⁸

The studies mentioned above prove that psychotherapy provides improvements in not only the psychological function but also improve the somatic function related to the organ at the cellular or even molecular level, through the limbic system as an emotional center, through the psycho- neuro-immuno- endocrine (PNIE) pathway; however, it needs further integrative studies.

Psychotherapy is provided of course based on the goals, socio-cultural and clinical background of the patient. The type and technique used to provide SP can also vary, from the length (duration), the time interval for the

next meeting, as well as the assessment of the outcomes,⁶¹⁻⁶³ as planned in this developed SP for professionals healthcare.⁸⁹⁻⁹⁰

The second round of Delphi, the expert panelists assessed the feasibility of SP framework and structured sessions for ACS patient with a Likert scale of one to six which could already describe the level of agreement of the expert panelists.⁹¹⁻⁹²

The characteristics of the expert panelists related to education and profession show adequate qualifications, at least according to their respective fields that support the topic and material in this study. Expert panelists who have at least 10 years of experience in the field will add to the validity of this study. It can be seen in the result of the second round Delphi method that an agreement was reached according to the specified conditions (>80%). According to Hasson et. al.⁹³, consensus does not have to be agreed upon by all expert panelists, and this study determined that a minimum of 80% of participants' consent was needed to reach a consensus. The number of samples, research objectives, and available resources were taken into account in determining consensus, and this may increase validity.

The strength of the study we use many resources and many experts related to the topic and study material while the limitations of the study conducted during a global pandemic that may limit communication with both psychotherapists and patients. It was done only in one country, Indonesia.

CONCLUSION

All resources related to SP for professionals healthcare of ACS patients' management support this study Valid and reliable self-reported questionnaire was created to collect informant opinions uses Delphi technique as a modified Delphi method. The first round of Delphi, a draft was compiled which received input and improvements from expert panelists. The second round of Delphi, an assessment was carried out by expert panelists on a Likert scale and a consensus was reached. The SP framework and structured sessions for professionals healthcare of ACS patients' management was developed. This SP may be

applied in clinical practice and research for professional healthcare in the management of ACS with attention to socio-cultural.

CONFLICT OF INTEREST

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

AUTHOR CONTRIBUTIONS

HS contributing author, designing, analyzing, writing the results, and discussion. IA, RI, KW, contributing the analyzing and the review process. HQ, KH. contributing designing and results analyzing. IA, PS, IR, SS contributing the review process. RP, VA. results analyzing, writing discussion. PR, SD contributing the analyzing and the review process. All author contributed equally for this paper.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors.

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ATTACHMENT

Structured SP Session's Model for professionals healthcare in the management of ACS.

First Session: aims to develop a good relationship and cooperation between doctors and their patients, **build therapeutic alliances**, provide opportunities for patients to express themselves (according to the patient's ability) and doctors to become better listeners.

First Session

No	Question/Statement	10 Expert panelist Agree %
1.	D: Assalamu'alaikum,wr,wb. / Good morning, (smile in a friendly manner), what is your name? P:	100
2.	D: This is our first meeting. I am dr..... from the psychosomatic division. Is there anything I can help you with? P:	100
	If the patient doesn't response, see if SP is needed or proceed to point 3.	
3.	D: Please tell me how you feel today. P:	100
	(Next question/statement depends on the patient's response) . If needed, give SP related to point 2	
4.	D. Please tell me about the complaints you're feeling today. (Current symptoms or complaints: chest pain/shortness of breath/nausea/vomiting/tingling/numbness/fatigue/dizziness? etc.). P:	100
	(If P states one or more complaints that he/she feels , then D proceeds to point 5)	
5.	D: What are you concerned about at the moment (current symptoms or complaints: chest pain/ shortness of breath/ nausea/vomiting/tingling/numbness/fatigue/dizziness? Etc.) P:	100
	(The questions/statements asked by D to P are related to the patient's response regarding symptoms or complaints)	
6.	D: These are your concerns →	80
	(Point 6 is D's response towards patient's response or the doctor sums up the patient's concerns	
7.	D: Other than those complaints, do you have any other complaints?? P:	100
	(Point 7 as a continuation to P's response in point 5)	
8.	D: After knowing that you have this condition, (corresponding to point 7), what efforts have you made to remedy this condition? P:	100
9.	D: Alright, that's what you experienced and how you tried to solve it. If P hasn't made any efforts . D's Response: nod to show understanding. If P makes an effort and tells the results of his efforts and the efforts are not dangerous and according to D are good, D: nod to show understanding. If necessary, support these positive efforts	100
10.	D: Yes, hopefully we can deal with this condition well. P:	100
	D: SP if needed, the type of SP used is according to the needs.	
11.	D: Tell me about the treatment that you have had P:	100
12.	Please tell me your opinion about the treatment that will be undertaken/ what do you think about the treatment that you will get? P:	100
	D: Explain and use SP when needed	
13.	D: Is there anything else you would like to tell or ask me?	100
14.	D: Thank you for sharing your current condition with me. We will discuss it further tomorrow, insha'Allah. Let us pray together so that you will get well soon and be healthy again. Aamiin P:	100
	Pray silently with the patient.	
15.	D: 1 st meeting session is ended with greetings: Assalamu'alaikum / Good Morning / Afternoon / Evening. P:	100
	D: See you tomorrow	

D: doctor; P: patient

The Second Session: aims to help patients relate to the problems/conditions being faced, **increase self- confidence (esteem-building) and patient's coping mechanism.**

(Note: The **second session** and **third session** may precede each other according to the patient's needs).

Second Session

No	Question/Statement	10 Expert panelist Agree %
1.	D: Assalamu'alaikum Wr. Wb./Good morning/afternoon/evening Sir/Ma'am P:	100
2.	D: This is our second meeting... In this meeting, we will discuss the conditions that you explained yesterday. P:	100
3.	D: Please tell me about the complaint (chest pain / shortness of breath / nausea / vomiting / tingling / numbness / fatigue / dizziness, etc.) you told me about previously) P:	100
	(the next process depends on the patient's response), D: explain and use SP when needed	
4.	D: What efforts have you made? (related to chest pain/shortness of breath/tiredness or others). P:	100
	D: SP strengthens patient's positive efforts.	
5.	D: So far you have understood the treatment and the continuation of the treatment, hopefully you will be able to implement it P:	100
6.	D: Doyou already know or remember the rules for taking your medication or the treatment plan? P:	100
	D:(Educate and do SP related to the rules for taking medication or treatment plan as needed)	
7.	D: Please tell me your expectation from this treatment? P:	100
	Observe the patient's emotions. Give reassurance if the patient is worried about the outcome of the treatment.	
8.	D: What physical activities can you already do? P:.....	80
9.	D: Alright, Sir/Ma'am. So far, are you comfortable? P:	90
10.	D: Yes, that is our hope that you will get well soon and be healthy again P:.....	100
11.	D: (According to the patient's response) I will try to support you. The feelings that you have and the activities that you have achieved could happen to anyone who faces similar conditions. Keep up the spirit to be stronger. P:	90
12.	D: (According to the patient's response) Try to imagine positive things in your life; remember that everything is in His power. Hopefully it will get better gradually, P:.....	90
13.	D: May Allah ease any hardship you are going through, Amiin	90
14.	Is there anything else you would like to tell me? P:.....	100
15.	D: Alright, Sir/Ma'am, I think this concludes our meeting today, tomorrow we'll meet again, Assalamu'alaikum / Good morning/afternoon/evening	100

D: doctor; P: patient

Third Session: aims to help reducing **the tension**, related to problems/illness faced by patient.

Third Session

No	Question/Statement	10 Expert panelist Agree %
1.	D: Assalamu'alaikum Wr. Wb./Good morning/afternoon/evening Sir/Ma'am. We meet again for the third time. P:	100
2.	D: This is our third meeting, we will discuss the conditions that concern you or make you anxious/sad the most (according to session 1 point 8) P: Explain and use SP when needed	100
3.	D: Please tell me about the condition of your disease ? (pay attention to anything that makes the patient anxious, sad, emotional, etc.) P: D: Explain and use SP when needed	100
4.	D: Please describe the efforts that you have done in dealing with the worrisome condition (disease)? P: (Support it if the effort is positive and avoid it when the patient's efforts are not profitable)	100
5.	D: What have you been thinking about so far? (Explore all the things that concern the patient or make the patient anxious; for example: the future, how to live a life with coronary heart disease, guilt towards family, friends at work, family support, undergoing a series of examinations and therapies that must be endured, side effects of therapy, costs treatment, life companion) P: D: Explain and use SP when needed	100
6.	D: What do you know or think about the examination and treatment that you are currently undergoing or will undergo? (related to medication/side effects/medication fee/intervention procedure,etc) P:..... D: Explain and use SP when needed	100
7.	D: What do you think about point 6 related to your current disease/condition? P:..... D: Explain and use SP when needed	100
8.	D: In your opinion, what efforts need to be made to go through this kind of condition? P: (D: SP if needed to support the patient's positive efforts, etc)	100
9.	D: How is your family's attention to your current condition?/ How much attention does your family pay to your current condition? P: D: Explain and use SP when needed	100
10.	D: How is your family's support for the treatment that you will have to undergo? P: D: Explain and use SP when needed	100
11.	D: How is the support from your friends for the treatment that you will have to undergo? P: D: Explain and use SP when needed	100
12.	D: What are your future views regarding this condition? P: Pay attention to the patient's response. The doctor can discuss anxiety, depression that often occurs in ACS	100
13.	D: Do you have feelings of anxiety, sadness, anger, etc.? P:..... Doctor can discuss anxiety, depression. If the patient looks worried, sad, emotional, SP; sooth and reassure him/her and say that everything will get better..	100
14.	Is there anything else you would like to tell or ask me? P: D: Explain and use SP when needed	100
15.	D: Alright, let's meet again tomorrow. Thank you, Sir/Ma'am. Assalamu'alaikum/ Good Morning/ Afternoon/Evening. P:.....	100

D: doctor; P: patient

Fourth Session: aims to help in **decision-making** and in educating the patient about the current concerns/disease he/she is facing.

Fourth Session

No	Question/Statement	10 Expert panelist Agree %
1.	D: Assalamu'alaikum/Good morning/afternoon/evening, Sir/Ma'am. We meet again for the fourth time. P:	100
2.	D: In this meeting, we will discuss the medication/treatment that you will undergo. P:	100
	D: Explain if needed	
3.	D: How are you feeling today? P:	100
	D: Explain and use SP when needed	
4.	D: What do you know about the treatment/procedure that you're going to undergo? P:	100
	D: Explain and use SP when needed	
5.	D: What do you think about the medication/treatment that you will get?P:	100
	D: Explain and use SP when needed	
6.	D: Do you know about the next treatment? P:	100
	D: Explain and use SP when needed	
7.	D: Do you know the rules for taking medicine/ getting treatment? P:	100
	D: Explain and use SP when needed	
8.	D: What can support your treatment? P :	100
	D: Explain and use SP when needed	
9.	D: What kind of results do you expect from the treatment? P:	100
	(D: Reassurance SP is given if the patient is anxious, worried, pessimistic,etc)	
10.	D: Is there anything else you would like to tell or ask me? P:.....	100
	D: Explain and use SP when needed	
11.	D: Alright, let's meet again tomorrow. Thank you, Sir/Ma'am. Assalamu'alaikum/ Good Morning/Afternoon/Evening. P:.....	100

D: doctor; P: patient

Fifth Session (termination): aims to explain the results of the meeting and assess what is necessary to help the patient deal with the disease and its treatment

Fifth Session.

No	Question/Statement	10 Expert panelist Agree %
1.	D: Assalamu'alaikum/Good morning/afternoon/evening, Sir/Ma'am We meet again for the fifth time, our last day of meetings. P:	100
2.	D: In this meeting, we will discuss what we have talked about in previous meetings P:	100
3.	D: How are you feeling today? P:	100
	SP to strengthen the patient's psychological state	
4.	D: How do you currently feel about your complaints? (chest pain, dizziness, nausea, vomiting, numbness / tingling, shortness of breath, etc.) according to the previous meetings. P:	100
	D: Explain and use SP when needed	
5.	D: Please tell me about your efforts in developing your ability to deal with the symptoms / complaints that arise? (chest pain, dizziness, nausea, vomiting, numbness / tingling, shortness of breath, etc. (According to the 4 previous meetings) P:	100
	D: Explain and use SP when needed	
6.	D: Do you still have any complaints, worries, sadness or feelings of helplessness, etc. ? Can you tell me about the improvement you have experienced? P:	100
	(Reflection with the patient)	
7.	D: What do you think about your ability in overcoming the problem in point 6 session 5? (Reflection with the patient) P:	100
	D: If needed, strengthen/help the patient with SP as needed	
8.	D: How do you feel about being allowed to be discharged? P:	100
	D: Strengthen the positive parts	
9.	D: Is there anything you would like to say regarding the things that we have discussed so far? P:.....	100
	D: Explain and use SP when needed	
10.	D: Is there anything else you want to talk about besides the issues we discussed? P:.....	100
11.	D: After we undergoing these five sessions, I can conclude that P:	100
12.	D: It seems that ... you are quite able to accept this condition. (or vice versa, do you still need support to accept the conditions that you are currently experiencing? D: Explain and use SP when needed, consider when to refer to a Psychiatrist / Clinical Psychology P:	100
13.	D: You are able to make the decisions about the treatment that you will have (or are there still things that you want to consider in making decisions about the treatment you will undergo) (depending on the patient's response, if necessary, give SP, according to the circumstances and needs) P:	100
14.	D: Do you feel well, comfortable and safe? P:.....	100
	Look at the patient's response. If the patient says yes, advise him/her to consult the Psychosomatic Polyclinic or to the Psychiatry Clinic or a clinical psychologist. If needed, SP can be continued for a while to make the patient feel safe and comfortable.	
15.	D: I'll end our fifth session meeting. May you get well soon. Wassalamua'alaikum/ Good morning/afternoon/evening. P :	

D: doctor; P: patient