

## Appendix

### Outline of content of Mindfulness-based Psychoeducation Program

#### Introduction

The Mindfulness-based Psychoeducation Program (MBPP) consists of 12 bi-weekly, two-hour group sessions. Each group contains five to six members, led by a trained psychiatric nurse or mental health professional. The program was developed on the basis of the psychoeducation programs by Chien and Lee (2010) (8) and Lehman et al (2004) (4), and the 8-session Mindfulness-Based Stress Reduction Program by Kabat-Zinn et al (1992) (12).

The MBPP was developed to enhance patients' understanding about schizophrenia and its treatment and the community services available to them, increase their insights into their illness and its symptoms, and improve their acceptance and control of psychotic symptoms, particularly hallucinations, delusions and related life problems. One specific goal/purpose of this program is to teach patients to become more aware of and to relate differently to their disorganized, unreal and/or negative thoughts, feelings and sensations, rather than identifying with them as accurate readouts on reality.

#### The Mindfulness-based Psychoeducation Program

The MBPP is comprised of three phases:

- Phase I: Orientation and engagement, focused awareness of symptoms and control of psychotic symptoms;
- Phase II: Educational workshop on schizophrenia and its treatment and care; and
- Phase III: Strategies in relapse prevention, community support and future plans.

The structure and content of the MBPP are outlined in the following table:

Phase	Component	Goals or Rationale	Main topics/themes	Practice
I	1.Orientation and engagement (2 sessions)	a. Establishment of mutual trust and respect, treatment goals and objectives, and expected roles and responsibilities in the group; and b. Understanding of the group program and	<ul style="list-style-type: none"> <li>• Orientation to the MBPP and its functions</li> <li>• Establishing trust and respect among group members</li> <li>• Achieving agreed</li> </ul>	<ul style="list-style-type: none"> <li>✓ Self-introduction and game activities</li> <li>✓ Group discussion about their roles and responsibilities in the group, and about schizophrenia and its impacts on</li> </ul>

		information about the illness and its symptoms.	goals and objectives • Schizophrenia and its impacts	patients and their families.
I	2.Focused awareness of bodily sensations, thoughts, feelings and symptoms (3 sessions)	<p><u>Session 1: Stepping out of automatic pilot and negative thoughts</u></p> <p><u>Rationale:</u></p> <ul style="list-style-type: none"> <li>○ Mindfulness starts when we recognize the tendency to be on automatic pilot;</li> <li>○ Commitment to learning how to step out of it and being aware of each symptom and related experience; and</li> <li>○ Practice in purposefully drawing attention to bodily sensations and movements.</li> </ul> <p><u>Session 2: Mindfulness of the breath and staying present</u></p> <p><u>Rationale:</u></p> <ul style="list-style-type: none"> <li>○ Becoming familiar with the behavior of the mind (often being busy and scattered);</li> <li>○ The mind is most scattered when trying to cling to something and avoid others; and</li> <li>○ Mindfulness offers a means to stay present by providing another place from which view things.</li> </ul>	<ul style="list-style-type: none"> <li>• Body scan, noticing sensations, feelings and thoughts</li> <li>• Dealing with barriers to focusing thoughts, emotions and events, particularly pleasurable events</li> <li>• Awareness of the breath offers an anchor to the present (a possibility of being more focused and gathered)</li> <li>• Categorizing experiences vs. describing bare sensations/thoughts</li> <li>• Getting to know the territory of schizophrenia</li> </ul>	<ul style="list-style-type: none"> <li>✓ Body scan</li> <li>✓ Breath and awareness and mindfulness thereof</li> <li>✓ Focusing on both pleasant and annoying events</li> <li>✓ Focused awareness of the body, thoughts and feelings (homework)</li> <li>✓ Seeing/hearing and choiceless awareness of breath, body, sounds, and thoughts</li> <li>✓ 3-minute breathing space (awareness of body, re-directing and expanding attention), opening with out-breath)</li> <li>✓ Stretching and breathing (homework)</li> <li>✓ Walking and focused sensation</li> <li>✓ Yoga (homework)</li> </ul>

	<p><u>Session 3: Acceptance, holding, allowing; and letting be</u></p> <p><u>Rationale:</u></p> <ul style="list-style-type: none"> <li>○ Relating differently involve bringing to the experience a sense of allowing it to be as it is, without judging it or trying to make it different; and</li> <li>○ An accepting attitude is a major part of taking care of oneself and seeing clearly what, if anything, needs to change.</li> </ul>	<ul style="list-style-type: none"> <li>• Allowing and accepting attitude towards the illness and its symptoms</li> <li>• Awareness of and opening up troubles in the mind; expanded breathing and stress-holding space</li> </ul>	<ul style="list-style-type: none"> <li>✓ Exercise on awareness of breath, body, thoughts and emotions</li> <li>✓ Recognizing and discussing difficulties with such awareness</li> <li>✓ Expanded breathing space – opening up troubles in the mind and settling down these troubles</li> <li>✓ Mindful walking</li> </ul>
I	<p>3. Empowerment of self-control of psychotic symptoms and negative thoughts (1 session)</p> <ul style="list-style-type: none"> <li>○ Negative thoughts and moods that accompany them color or reduce our ability to relate to experience;</li> <li>○ Thoughts are merely thoughts, we can choose whether to engage with them or not; and</li> <li>○ The same patterns of thoughts recur again and again, without necessarily having to question them and seek alternatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Thoughts are not facts – alternative perspectives of seeing your thoughts and sensations</li> <li>• Options for working with negative and disorganized thoughts</li> <li>• Recognizing the recurring thoughts and standing back from them, without questioning them</li> </ul>	<ul style="list-style-type: none"> <li>✓ Expanded breathing space</li> <li>✓ Alternative perspectives and options for working with thoughts</li> <li>✓ Diary writing and awareness of early warning signs of relapse</li> <li>✓ Selection of practices (homework)</li> </ul>

II	1. Knowledge of schizophrenia and its care (2 sessions)	<ul style="list-style-type: none"> <li>○ Understanding psychotic symptoms and individual psychosocial health concerns;</li> <li>○ Understanding cultural issues within family and society; and</li> <li>○ Identifying important needs for patients, self and family.</li> </ul>	<ul style="list-style-type: none"> <li>● Patients' individual health needs in relation to schizophrenia care</li> <li>● Information sharing of schizophrenia and its treatment</li> <li>● Sharing of behavioral and perceptual problems, intense emotions, and feelings about illness management</li> <li>● Discussing ways to deal with negative thoughts and emotions, cultural issues and beliefs of mental illness, stigma and family</li> <li>● Information about medication and its effects, self-care, daily activities and functioning, and illness and home management.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Group discussion and video watching</li> <li>✓ Information search from internet and health care organizations</li> <li>✓ Expert (both ex-patients and professionals) sharing</li> <li>✓ Selection of mindfulness practices learned (homework)</li> <li>✓ Communication and social skills training</li> </ul>
II	2. Illness management and problem solving (1 session)	<ul style="list-style-type: none"> <li>○ Information about self-management of schizophrenia and its related behavioral problems; and</li> <li>○ Learning effective coping and problem solving skills.</li> </ul>	<ul style="list-style-type: none"> <li>● Enhancing social support, stress coping and problem solving skills by working on each member's life situations</li> <li>● Performing behavioral rehearsals of social interactions with co-</li> </ul>	<ul style="list-style-type: none"> <li>✓ Group discussion and video watching</li> <li>✓ Ex-patients' sharing of illness management experiences</li> <li>✓ Role play on coping and problem-solving skills</li> </ul>

			patients (and invited family members) within groups	✓ Practices of coping skills learned (homework)
			• Review of real-life practice of coping skills learned in group sessions	
III	1. Behavioral rehearsal of relapse prevention (2 sessions)	<p><u>Session 1: How can I best take care of myself?</u></p> <p><u>Rationale:</u></p> <ul style="list-style-type: none"> <li>○ Specific things can be done when psychotic symptoms threaten my living and functioning;</li> <li>○ Taking a breathing space first and then deciding what action to take;</li> <li>○ Each patient has his/her own unique patterns of symptoms and relapse and thus also his/her own prevention strategies; and</li> <li>○ Group members can provide support and help each other to plan the best self-care.</li> </ul> <p><u>Session 2: Using learned skills to deal with future problems in thoughts and moods</u></p> <p><u>Rationale:</u></p> <ul style="list-style-type: none"> <li>○ Maintaining balance in life is helped by regular mindfulness practice; and</li> <li>○ Good intentions can be</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying signs of relapse and associated factors</li> <li>• Reflect on daily activities, stressors and accompanying emotions (i.e., nourishing vs. depleting activities)</li> <li>• Evaluation of self-care, illness management, coping skills and interpersonal relationships</li> <li>• What thing(s) in our life do you value most and what can the practice help you with?</li> <li>• Preparing for future life problems and relapse prevention</li> <li>• Consolidation of</li> </ul>	<ul style="list-style-type: none"> <li>✓ Group discussion</li> <li>✓ Role play and behavioral rehearsals of coping skills and self-reflection</li> <li>✓ Awareness of breath, body, sounds, thoughts, difficulty, and social support</li> <li>✓ Breathing space and selecting forms of practice to continue</li> <li>✓ Continuous practice of coping skills learned (homework)</li> <li>✓ Body scan, sitting and walking mindfulness</li> <li>✓ Best wishing and positive thinking</li> <li>✓ Group discussion about future problems</li> <li>✓ Continuous practice</li> </ul>

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		strengthened by linking practice with positive thoughts and reasons for taking care of oneself.	selected and practiced coping and mindfulness skills	of selected mindfulness strategies (homework)
III	2.Community resources and future plans (1 session)	<ul style="list-style-type: none"> <li>○ Being familiar with community support services and resources for schizophrenia care;</li> <li>○ Review of main issues and those skills learned and selected for practices; and</li> <li>○ Planning for future independent living.</li> </ul>	<ul style="list-style-type: none"> <li>● Summary of the main issues and topics covered and knowledge and skills learned</li> <li>● Introduction of available community support resources</li> <li>● Issues expected in future life and psychological and behavioral preparations for the future</li> <li>● Action plans for illness management and the future</li> <li>● Questions and comments from group members and specific requests for follow-up</li> </ul>	<ul style="list-style-type: none"> <li>✓ Body scan and mindful walking</li> <li>✓ Discussion about learning from the program and plan for the future</li> <li>✓ Checking each person's support resources / mechanisms</li> <li>✓ Invitation to outcome assessment and interviews</li> </ul>

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**Table:** Baseline sociodemographic characteristics of trial participants who received mindfulness-based psychoeducation (MBPP) or only usual care and of nonparticipants

Variable	MBPP (N=48) <sup>a</sup>		Usual Care (N=48) <sup>a</sup>		Non- participants (N=241) <sup>a</sup>		Test value <sup>b</sup>	p
	N	%	N	%	N	%		
Gender							1.12	.23
Male	26	54	27	56	135	56		
Female	22	46	21	44	106	44		
Age (M±SD; range)	25.3 ± 8.2; 19-40		26.5 ± 8.9; 19-41		27.2 ± 9.9; 18-45		1.39	.15
18 – 29	31	65	30	63	150	62		
30 – 39	13	27	14	29	70	29		
40 – 49	4	8	4	8	21	9		
Education level							1.48	.12
Primary school or below	5	10	7	15	33	13		
Secondary school	29	61	28	58	138	57		
University or above	14	29	13	27	70	29		
Monthly household income, HK\$ (M±SD)	11,240± 2,034		11,935± 2,015		12,510± 2,562		1.78	.10
5,000 – 10,000	9	19	8	17	40	17		
10,001 – 15,000	21	44	22	46	105	43		
15,001 – 25,000	12	25	11	23	51	21		
25,001 – 35,000	6	12	7	14	45	19		
Duration of illness (M±SD; range)	3.0 ± 2.0; 0.25 – 5 years		3.2 ± 2.3; 0.5 – 4.5 years		3.5 ± 3.0; 0.5 – 5 years		1.75	.10
3 months – 1 year	8	17	7	15	35	15		
1 – 2 years	20	42	21	44	104	43		
2 – 3 years	16	33	15	31	76	31		
3 – 5 years	4	8	5	10	26	11		

Number of family members living with patient							1.32	.17
1	23	48	22	46	110	46		
2 – 3	21	44	22	46	110	46		
4 – 5	4	8	4	8	21	8		
Use of psychiatric services							2.25	.10
Medication consultation and treatment planning	47	98	46	96	232	96		
Nursing advice on services	40	83	44	92	228	75		
Brief family education	38	79	37	77	180	75		
Types of medication							1.62	.14
Conventional antipsychotics (e.g., haloperidol)	10	21	11	23	55	23		
Atypical antipsychotics (e.g., risperidone)	16	33	17	35	94	39		
Antidepressants (e.g., Prozac)	8	17	7	15	30	12		
Blended mode	14	29	13	27	62	26		
Dosage of medication							1.69	.13
High	10	21	9	19	50	21		
Medium	29	60	30	62	140	58		
Low	9	19	9	19	51	21		

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MBPP, Mindfulness-Based Psychoeducation Program.

<sup>a</sup> Denotes frequency (f %) or mean  $\pm$  standard deviation, and range.

<sup>b</sup> An analysis of variance (F-test, df=335) or the Kruskal-Wallis test by ranks (H statistic, df=2) was used to compare the socio-demographic variables of patients among the three groups.

<sup>c</sup> US\$1 = HK\$7.8

<sup>d</sup> Patients were taking more than one type of psychotropic medication such as the use of both conventional and atypical antipsychotics or an atypical antipsychotic together with one anti-depressant.

<sup>e</sup> Dosage levels of neuroleptic medication were compared with the average dosage of medication taken by schizophrenic patients in Haloperidol-equivalent mean values (1,8).