

ORIGINAL PAPER

A SURVEY OF URBAN CHILD AND ADOLESCENT MENTAL HEALTH PROBLEMS IN AN URBAN MALAYSIAN POPULATION

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Abstract

A total of 307 Malaysian children and their parents were surveyed to ascertain the prevalence of mental health problems amongst urban primary and secondary school children. The results indicated that secondary school children report slightly higher rates of depressive symptoms, whereas primary school children report higher rates of social problems. There was also a discrepancy between child and parents reports of children's emotions and behaviours. Children's self-reports of aggressive behaviours were higher than their parents' reports. Alternatively, parents reported lower levels of their children's emotional problems, as compared with the children's self-report. When gender was taken into consideration, females were reported to be more aggressive, withdrawn, and have more attention problems when compared with males.

Key words: Children, Adolescents, Mental Health

Introduction

Many developments have taken place in Malaysia, be they social, economic, political or religious. These developments have rapidly impacted on the physical, moral and familial environment of our urban society. The modes of change have been via physical changes, government policies, ideologies and the media. In the midst of all the changes are children, the future of our country. Growing up in a rapidly changing urban society must indeed be a bewildering experience for these children, so many ideas, so many attitudes and so many role models to emulate. All these experiences must somehow impact on the child's attitudes, beliefs and actions about self and society. These eventually impact on their mental

health. This study is about the lives of children and their families. It seeks to find out what the state of the child's mental health is.

Measures of children's mental health vary from study to study. Some researchers see mental health as encompassing a combination of outcomes such as the child's self-concept, reading ability and life skills [1]. Other researchers have chosen academic indicators of performance such as reading, mathematical ability and behavioural problems [2, 3]. Anxiety, depression and delinquency which are indicators of mental health problems have been used [4, 5]. Finally, others also consider anti-social behaviours such as sexual problems and drug involvement to be

indicators of children's adjustment [6]. For the purposes of this review, children's mental health problems will be defined as encompassing both internalising and externalising behaviours [32]. Academic performance is generally not included as a measure of mental health problems given that Patterson [7] empirically developed a model which indicated that inept discipline predicted anti-social behaviours in children, which in turn predicted poorer academic performance. Hence, as children's behavioural problems have been found to affect academic performance rather than vice-versa, emotional and behavioural indicators of children's mental health rather than their academic abilities will be used.

A previous large scale survey has shown that the prevalence rate of mental health problems amongst Malaysian children has been observed to be similar to those of other countries. In Malaysia, the prevalence was found to be 13%, of which the prevalence was 10.5% in urban areas and 15.5% in rural areas [8]. Teoh [9] observed that the prevalence rate of depression in a population of 243 Malaysian lower secondary school girls was 14%. An earlier study of coping style amongst 401 Malaysian lower secondary school girls observed that the prevalence of low self-esteem amongst this population was 16.7% [10]. Elsewhere, the overall rates of Mental Health problems in children was found to be 17.7% in Australia [11], 18.1% in Canada [12], 17.6% in New Zealand [13], 26% in The Netherlands [14] and 17.9% in Puerto Rico [15].

Several specific mental health problems have been commonly cited by mental health surveys. In Malaysia, the most common mental health problems cited can broadly be categorised into either the learning disabilities or affective disorders [8]. In Australian samples, by far the most

prevalent disorders amongst children are delinquent (9.5%) and thought problems (8.6%) [11]. Amongst U.S. children, the most commonly cited disorders are disruptive behaviour disorders, separation anxiety, overanxious disorder and depression [16]. In New Zealand, Anderson [13] reported that the most commonly diagnosed disorder was attention deficit disorder (6.7%), followed by oppositional disorder (5.7%).

While the Malaysian studies yield some useful information about the overall prevalence of mental health problems amongst children, a major flaw involves whom the data is collected from. In all studies, the data obtained has originated from a single source, either from the parent [8], or from the child [10], but never from both. Obtaining data on children's adjustment from a single source can be problematic, particularly as several studies report very little relation between reports by parents, children and teachers on a variety of child related issues. Pedro-Carroll [5] found that while parents reported more overall adjustment problems amongst their children, teachers did not report any behavioural problems. They also found that while children reported emotional problems such as anxiety and low self-confidence, parents did not report their children as having higher levels of these internalising problems. Similar observations were made by Stolberg and Mahler [17] who indicated that while teachers did not report any externalising behaviours, parents did. Parent's reports of other child-related factors such as the stressfulness of negative life events and amount of social support received, has also been found to differ from their children [18, 19, 20]. There are disadvantages to collecting data either from a single source and advantages to collecting data from multiple sources. Collecting data from a

single source may be biased as parents may be aware of their children's behaviours, but may not be aware of their children's emotional state. A study documented low correlations between children's and parent's reports of children's depression [21]. Furthermore, parent's reports of their children's behaviours may be affected by the parent's emotional state [19, 22]. Therefore, it is recommended that data be collected from multiple sources, which includes the parent or care-giver and the child.

In Malaysia, more males, as compared with females were found to have psychiatric problems (14.1% vs. 11%) [8]. Similar results have been obtained in Australia where the Western Australian Child Health Survey observed that more males as compared with females (20% vs. 15.4%) had more mental health problems [11]. Other Australian surveys have shown that boys, compared with girls, are more likely to be aggressive, delinquent, have attention, thought and social problems [23]. American studies have indicated that generally, boys are referred more often than girls for conduct disorder type problems such as aggression and delinquency [24], at ratios of 4:1 to 12:1 [24]. In addition more attention problems have been reported amongst boys than girls [25]. Generally, boys are more vulnerable than girls, and thus further work needs to be conducted on the effects of family processes on boys. Previous studies provide some indication that boys have poorer temperaments and are more likely to be subject to harsher forms of discipline, however the effects are relatively minor [23]. These results may be due to the study sample consisting of a non-clinical population.

When age is taken into consideration, the prevalence of mental health problems varies. When age grouping is taken into

consideration, we notice that the prevalence of mental health problems differs according to age. In Malaysia, the age group reported to have the most problems were the 10-12 year olds (15.5%), followed by the 13-15 year olds (16%) [8]. The age group with the least reported psychiatric problems were the 5-6 year olds (9.7%). In Australian samples, younger children (4-11 years) were reported by their parents to be have more delinquency type problems, whereas older children (12-16 years) were found to have more thought problems [11]. Older children were also found to have more behavioural and emotional problems, when compared with younger children. Many other large scale studies (i.e., Australian, Canadian, British) also indicate that younger children (ages 5-10 years), as compared with older children (ages 11 - 18 years) appear to be more vulnerable to developing anxiety, depression and delinquent behaviours [23, 26, 27]. Esser et al [28] found in a German sample that the prevalence of conduct disorder increased from 1.8% at age 8 to 8.4% at age 13. However did not find any change in the rates of emotional problems (7-8%).

The prevalence of mental health problems also appears to differ according to race, socio-economic status and location of household in Malaysia. Of the main racial groups, the Indian community had the highest rate of psychiatric morbidity (24.6%), followed by other non-Malay ethnic groups (23.6%), then the Malays (11.9%) and lastly the Chinese (3.6%) [8]. The lower the household income, the greater the amount of reported psychiatric problems. Furthermore, the prevalence was higher in rural, as compared with urban areas (10.5% and 15.5%). Studies conducted elsewhere have also observed that lowered socio-economic status has also been found to predict poorer children's adjustment [29].

However, Zubrick [30] found that low income in divorced families predicted children's adjustment, whereas low income in non-divorced families did not affect adjustment. This suggests that additional hardships in addition to low parental income, is the factor that predicts children's mental health. Zubrick [30] suggests that the lack of opportunities which income normally provides is a contributing factor to poor mental health.

Methods

The aim of this study was to estimate the prevalence of mental health problems amongst children and adolescents in an urban setting. To answer the research questions, a single survey, employing a cluster convenience sample, was employed. This was part of a larger study that sought to understand the social and family factors that predicted mental health problems amongst children. Criteria for subject selection and choice of questionnaires were based on issues identified in the literature.

Sample Description

307 Malaysian children and their parents were involved in the study. Permission was first obtained from the Ministry of Education and the Heads of Schools to include their schools in the survey. In total, there were two secondary and two primary schools in Kuala Lumpur involved in the study. It was impossible to control this study for gender, or race. As there were two school age-groups being studied (i.e., primary and secondary school), and a total of 10 internalising and externalizing variables, a minimum of 10 subjects per cell

was used as a standard. This would have required at least 100 subjects per school age-group. However, more students than the minimum number were obtained.

Children in this study were asked to complete the questionnaires in groups, of between 40 to 50 students, in their respective schools. The children were aged between 11-16 years old (M = 13 years 7 months, 155 females, 152 males) (see Table 1). Of this number, 152 children were from two primary schools (M = 11 years 8 months, 58 females, 94 males) (Standard 4-6), and 155 children were from two secondary schools (M = 15 years 6 months, 97 females, 58 males) (Form 1-3) (see Table 1). Eight years of age is viewed as the lower age limit for accurate self-reports [31].

The demographic data indicated that the number of years since parental separation ranged from 1.2 months to 11 years (M = 3 years 11 months). Prior to separation, the separated parents had been married for an average of 4 years 2 months and the non-separated parents for an average of 15 years 5 months (see Table 2). Of this number, 246 (80.1%) were Malay, 30 (9.8%) Chinese, 24 (7.8%) Indian and other races were 7 (2%). Religion wise, 250 (81.4%) were Muslim, 8 (2.6%) Christian, 27 (8.8%) Buddhist, 20 (6.5%) Hindu and 2 (0.6%) reported no-religion. The marital status of the parents were 45 (14.7%) single-parents, 221 (72%) married, 5 (1.6%) widowed, 6 (2%) divorced and 18 (5.9%) living together (see Table 2). The sample was an urban sample made up of 4 schools selected from the Klang Valley (i.e., Selangor / Wilayah Persekutuan).

Table 1: Number of Subjects According to Gender and School Age Groups

Age Group	N
Gender	307
Primary	
Males	94
Females	58
Sub-total	152
Secondary	
Males	58
Females	97
Sub-total	155

Table 2: Demographic Data for the Primary, Secondary and Parent's Marital Status, Religion and Racial Breakdowns

Description	Primary	%	Secondary	%	Total	%
Marital Status						
Single-parent	27	17.8	18	11.6	45	14.7
Married	104	68.4	117	75.5	221	72.0
Widow or widower	0	0	5.0	4.0	5.0	1.6
Divorced	3	2.0	3.0	1.9	6.0	2.0
Staying together	11	7.2	7.0	4.5	18	5.9
Unknown	7.0	4.6	5.0	4.0	12	3.9
Religion						
Muslim	102	67.1	152	98.1	250	81.4
Christian	8.0	5.3	0	0	8.0	2.6
Buddhist	25	16.4	0	0	27	8.8
Hindu	15	9.9	4.0	1.9	20	6.5
Other	2.0	1.3	0	0	1.0	0.3
Unknown	0	0	0	0	1.0	0.3
Race						
Malay	101	66.4	152	98.1	246	80.1
Chinese	30	19.7	0	0	30	9.8
Indian	20	14	3	1.9	24	7.8
Bumiputera (other than Malay)	0	0	0	0	1.0	0.3
Other	1.0	0.7	0	0	5.0	1.6
Unknown	0	0	0	0	1.0	0.3

Measurement Instruments

The questionnaires were all translated from English into Bahasa Malaysia by a Clinical

Psychologist and further back translated by another Clinical Psychologist and three other Clinical Psychology interns who were all fluent in Bahasa Malaysia and English.

Corrections for meaning were carried out to ensure that the English and Bahasa Malaysia translation were of equivalent meanings.

The children's mental health measures included the:

- Child Behaviour Checklist -parent reported
- Braver Aggressiveness Scale - child reported
- Center for Epidemiological Studies of Depression Scale - child reported

The Child Behaviour Checklist (CBCL) [32] comprises 118 statements of problem behaviours, which can be broken up into a total behaviour problems score comprising nine sub-scales scores [32]. Sexual problems are also measured by the CBCL, but are not included in the analyses as the scale items have low prevalence rates in a general population and most children have very low scale scores [32]. Coefficient alphas for the individual sub-scales are reported to range from .68 to .92. Average test-retest reliability has been reported as .95 [32].

The Braver Aggressiveness Dimension Scale [33] is a child self-report measure of the child's aggression. The scale consists of 14 items with three responses. The scale items are based on the CBCL [32] and has high internal consistency reliability, $\alpha = .83$.

The Centre for Epidemiologic Studies Depression Scale for Children (CES-D) [21] is a child self-report measure of depression. It consists of 20 items which have four answer choices. Weissman [21] found that the CES-D correlated reasonably well with the Children's Depression Inventory (34).

Procedure

A single survey was used to obtain the information from the subjects. Children in this study were asked to complete the questionnaires in groups, of between 40 to 50 students, in their respective schools. All parents and students were required to sign a consent form. A letter, and consent form, describing the study was sent to the parents via the students, and subsequent returned to the class teacher by the students. In class, the children's questionnaires were administered by one Clinical Psychologist and six Master of Clinical Psychology interns. Children were required to complete measures of internalising and externalising behaviours, temperament, social support, their perceptions of child-parent relationship and inter-parental conflict and coping style. Parents were required to complete questionnaires on the child's behaviours, disciplining style, their social support and their mental health. In all cases, the questions were read out to the subjects by the questionnaire administrators to ensure that all questions were answered, and that children had the opportunity to clarify the meaning of the questions. Questionnaires that the parents completed were sent to them by post and they were returned by post to the researcher.

Results

This section describes the prevalence of children's mental health problems according to gender and school age.

To find out the prevalence of mental health problems amongst children in this sample, and also to ascertain the role that gender and age plays, three levels of analyses were undertaken. Broadly, these analyses were categorised into developmental levels and clinical levels. Where the developmental levels were concerned, the mean scores of

each mental health sub-test were obtained and comparisons were done across school age. Where the clinical levels were concerned, initially the clinical cut-off scores for each sub-test was obtained,

following that the prevalence of mental health problems was observed across gender and school-age groups. The descriptive statistics are in Table 3 and 4.

Table 3: Descriptive Statistics of Primary School Children's Self and Parent Reported Mental Health Problems

Variable	Mean	SD	Minimum	Maximum
<u>Child-Reported</u>				
Aggressiveness	6.89	5.03	0.0	22.0
Depression	232	8.45	3.0	49.0
<u>Parent Reported</u>				
Aggression	56.32	6.73	50.0	84.0
Delinquency	56.89	6.33	50.0	79.0
Withdrawal	57.54	8.79	50.0	97.0
Anxiety	57.57	7.64	50.0	89.0
Attention problem	59.41	7.68	50.0	89.0
Social problem	59.63	7.24	50.0	83.0
Thought disorder	60.11	8.59	50.0	97.0
Somatic Complaint	61.20	9.84	50.0	95.0

Table 4: Descriptive Statistics of Secondary School Children's Self and Parent Reported Mental Health Problems

Variable	Mean	SD	Minimum	Maximum
<u>Child-Reported</u>				
Aggressiveness	6.82	4.07	.000	17.000
Depression	26.38	7.17	11.000	43.000
<u>Parent Reported</u>				
Aggression	56.18	7.02	50.000	78.000
Delinquency	57.03	6.68	50.000	78.000
Withdrawal	57.50	6.59	50.000	85.000
Anxiety	57.79	6.75	50.0	81.0
Attention problem	58.35	7.15	50.000	81.000
Social problem	59.42	9.18	50.0	93.0
Thought disorder	60.65	8.66	50.000	88.000
Somatic Complaint	65.50	8.27	50.0	84.0

Table 5: Comparison of Children's Self and Parent Reported Mental Health Problems by School Age Group

Variable	Mean Scores		F
	Primary	Secondary	
<i>Parent's of Reports Children's Mental health</i>			
Aggressive Behaviour	56.32	57.02	0.84
Anxiety	57.57	57.79	0.07
Attention Problems	59.41	58.34	1.57
Delinquent Behaviour	56.88	56.18	0.86
Social Problems	59.63	57.49	7.30**
Somatic Complaints	61.20	65.50	4.31*
Thought Problems	60.10	60.65	0.31
Withdrawal	57.54	59.42	55
<i>Child Reported Mental health</i>			
Depression	232	26.38	147**
Aggression	6.89	6.82	0.02

* $p < .05$ ** $p < .01$

The mean score for each of the mental health sub-scales was computed and the differences between primary and secondary school-aged children's mental health problems were observed using a series of univariate Analyses of Variance (see Table 5). The dependent variables were children's mental health problems and the independent variables were the two groups (i.e., primary vs. secondary school). From a developmental perspective, significant differences were reported by parents on measures of Social problems [$F(1, 305) = 7.3, p < .05$] and Somatic Complaints [$F(1, 305) = 4.3, p < .01$], children on measures of depression [$F(1, 305) = 15, p < .01$]. While primary school children were found to have higher levels of Social problems, secondary school children were found to have higher levels of Somatic Complaints and Depression.

To obtain the clinical ratings for the various mental health problems, the following cut-off scores were used. For the Centre for Epidemiological Studies of Depression scale, a score of 32.75 and for the Braver Aggressiveness Scale a score of 11.42 was used as the clinical cut-off scores, as used previously by the scale developers [21, 33]. Where the Child Behaviour Checklist was concerned, a T-score of 67 was used as the cut-off score as specified by Achenbach [32]. All three scales are widely used in the field of child psychiatry as benchmark standards for assessing internalizing and externalizing behaviours in children.

To obtain the association between rates of clinical disorder in children's mental health and gender and school age, Chi-Square tests were used. An alpha level of .01 was used for all statistical tests.

Table 6: Prevalence of Clinical Levels of Children's Self -Reported and Parent Reported Mental Health Problems according to Gender

Mental Health	Frequencies and Proportion	
	Male (%)	Female (%)
<u>Child-Reported</u>	N=152 (100%)	N=155(100%)
Aggressiveness	28 (18.4%)	26 (16.8%)
Depression	20 (14%)	32 (20.6%)
<u>Parent Reported</u>		
Aggression	5 (5%)	16 (10.3%)*
Delinquency	6 (3.9%)	12 (7.7%)
Withdrawal	18 (11.8%)	32 (20.6%)*
Anxiety	9 (5.9%)	13 (8.4%)
Attention problem	11 (7.2%)	22 (14.2%)*
Social problem	23 (15.1%)	13 (8.4%)
Thought disorder	23 (15.1%)	26 (16.8%)
Somatic Complaint	47 (30.9%)	38 (24.5%)

* $p < .05$

The total number of subjects was 307, which included 152 males and 155 females. Amongst males, the highest number of clinically significant mental health problems was parent-reported Somatic Complaints (30.9%), child-reported Aggression (18.4%), parent-reported Social problems (15.1%) and Thought disorder (15.1%) (see Table 6). The least reported problems were parent-reported Aggression (5%) and Delinquency (3.9%). A discrepancy in parent and child reported of Aggression is observed here. In this case, children reported that they were more aggressive than their parents realised.

When the prevalence of clinically significant mental health problems amongst females was scrutinised, it was observed that parent-7.2%; $\chi^2(1, N = 307) = 4.36, p < .05$. In all instances, girls as compared with boys have a higher level of these problems. Of the 307 children in this sample, 152 were in Primary school and 155 were in Secondary school. Amongst Primary school-aged children, the highest prevalence of clinical levels of

reported Somatic Complaints (24.5%), Withdrawal (20.6%), Thought disorder (16.8%) and child-reported Aggression (16.8%) were amongst the highest (see Table 6). Whereas parent-reported Anxiety (8.4%) and Social problems (8.4%) were the least reported mental health problems.

Table 7: Prevalence of Clinical Levels of Children's Self-Reported and Parent Reported Mental Health Problems according to School Age

Description	Frequencies and Proportion	
	Primary (%)	Secondary (%)
<u>Child-Reported</u>	N=152 (100%)	N=155 (100%)
Aggressiveness	30 (19.7%)	24 (15.5%)
Depression	16 (10.5%)	36 (24%)**
<u>Parent Reported</u>		
Aggression	9 (5.9%)	12 (7.7%)
Delinquency	5 (5%)	13 (8.4%)
Withdrawal	22 (14.5%)	28 (18.1%)
Anxiety	13 (8.6%)	9 (5.8%)
Attention problem	19 (12.5%)	14 (9%)
Social problem	26 (17.1%)**	10 (6.5%)
Thought disorder	23 (15.1%)	26 (16.8%)
Somatic Complaint	42 (27.6%)	43 (27.7%)

** $p < .01$

When comparing males and females on the prevalence of different categories of clinical levels of mental health problems, there are generally not much differences in levels (see Table 6). The only exception are parent reported aggression [10.3% vs. 5%; $\chi^2(1, N = 307) = 5.95, p < .05$], attention problems [14.2% vs. 7.2%; $\chi^2(1, N = 307) = 3.87, p < .05$] and withdrawn behaviours [14.2% vs. mental health problems are parent reported Somatic problems (27.6%), followed by child-reported Aggression (19.7%) and parent-reported social problems (17.1%) (see Table 7). The least reported problems are parent-reported Delinquency (5%), Aggression (5.9%) and Anxiety (8.6%). It is

important to note at this point that there seems to be some degree of conflict between parent and child reports of aggression, with children reporting that they are more aggressive than their parents realise. This observation lends support to earlier findings that inconsistencies often exist between parents and child's reports [22, 35, 20]. This further strengthens the argument for multiple sources of information when any research is conducted on children's mental health.

When the prevalence of clinical levels of mental health problems amongst Secondary school-aged children was scrutinised, parent-reported Somatic Complaints (27.7%) ranked the most prevalent problem (see Table 7). This was followed by child-reported Depression (24%) and parent-reported Withdrawal (18.1%). The least reported problems were parent-reported Anxiety (5.8%), Social (6.5%) and Attention problems (9%).

When comparing primary and secondary school-aged children on the prevalence of different categories of clinical levels of mental health problems, there is generally not much difference in levels (see Table 7). The only exception are parent reported social problems [17.1% vs. 6.5% ; $\chi^2(1, N = 307) = 8.41, p < .01$] and child-reported depression [24% vs. 10.5% ; $\chi^2(1, N = 307) = 8.79, p < .01$]. While secondary school children were found to have higher incidences of depression, primary school children were found to have higher incidence of social problems.

Discussion

In this study, the prevalence of children's mental health problems varied according to the disorder being examined. The prevalence ranged from between 5%

(Aggression) to 30.9% (Somatic Complaints). The overall prevalence of depression in females was slightly higher than previous studies. In this study, the prevalence of self-reported depressive symptoms was 20.6%, whereas in an earlier Malaysian study of urban lower secondary school girls, using identical instruments, the prevalence was 14% [9]. Where parent reported data is concerned, this trend is repeated as slightly higher levels withdrawn behaviours are reported.

When gender is taken into consideration, females were reported to be more aggressive, withdrawn and have more attention problems compared to males. These results are contrary to that of most other studies that have observed that males generally have more aggressive compared to females [24, 25]. As many mental health problems are caused by social and family factors, such as the media and family upbringing. These would require a re-examination of how these factors affect females as compared with males.

Where age is concerned, some differences are observed between the prevalence of mental health problems between primary and secondary school children. Secondary school children report higher rates of depression, whereas primary school children report higher rates of social problems. In this respect, the observations are similar to those of other studies where younger children are generally reported to have more externalising behavioural problems, and older children have more internalising behavioural problems [11].

While this study provides useful insights into children's mental health status, it is subject to lots of limitations. Firstly, the age range of this sample is rather limited and there is no information about the lower

primary and upper secondary age group of children. The age range covered in this study would be classified by some authorities as an adolescent sample, despite the distinction between primary and secondary school. Future studies would do well with expanding the sample to a broader population. The respondents of this study were limited to children and their parents. Future studies might do well in also including teachers as observers of the child's mental health. Once at school, the time that urban working parents spend with their children may be rather limited, thus including teachers as respondents may help to further verify the reports of children's mental health.

This study was limited to urban children, but what of rural children? The Malaysian National Morbidity survey reports that mental health problems may be slightly higher in rural areas. Despite being an urban-based study, this study was limited to a small number of schools. Perhaps future studies might include a larger number of schools across a wider socioeconomic base in the city.

Finally, for this study to be able to confidently state that it is representative of the population, it must be racially and socioeconomically proportionally representative of the population. Given that the sample was a voluntary convenience sample, the distribution is rather biased as the majority of the subjects are Malay; as such Indians and Chinese are poorly represented. Future sampling methodology might benefit from collaboration with the Department of Statistics in the selection of the sample based on the National Census and Enumeration Blocks.

To conclude, the numbers of children having symptoms of mental health problems are noticeable. With these problems, the social and emotional well-being of children needs to be a prime concern when developing health care policy. Given this situation, more research on the factors predicting children's mental health, and more services may be required to promote children's mental health and well-being.

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