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Mental Health in Rural Tasmania: a Preliminary Report from the Field

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ABSTRACT

There are different ways of providing mental health services to Australians living in rural and remote areas. Most involve visiting mental health specialists providing consultancy or clinical service to local medical practitioners or generic health professionals. Few involve the location of a mental health specialist in the community to provide clinical service, consultancy and case management. Yet, such a model is generally acknowledged as probably most likely to provide effective service delivery.

Approximately four years ago, a general medical practice in a rural community in Tasmania employed a mental health specialist through a one-off Commonwealth grant. The role of this person includes provision of direct clinical service to members of the community, consultancy on mental health conditions to local medical practitioners, and assisting the professional and general community in gaining a better understanding of mental health issues.

In 1999, the University Department of Rural Health (UDRH) in Tasmania was asked to establish a research program to evaluate the model. The UDRH agreed to undertake the research and added to the model by including rural mental health as part of the undergraduate preparation in Medicine, Nursing and Allied health disciplines.

The research is currently in progress and the design involves a mix of qualitative and quantitative methods. This paper presents the research design for the quantitative method, that involves three stages of data collection, and explores the initial data that has been gathered in the first stage of the research project.

INTRODUCTION

Ten years ago the Burdekin Report highlighted the deficiencies in the care of the mentally ill in Australia¹. Since that time there has been a considerable amount of effort and money focused on addressing the inequities in the system². As a result of these activities mental health services throughout Australia are slowly shifting their attention to primary mental health care models^{3,4}. This shift is partly due to a general recognition that people with psychological disturbance are best cared for in the community and by the push to implement “main streaming” of mental health services. It is also based in a growing recognition that the majority of people with psychological disturbance are not cared for by mental health professionals^{5,6}.

It is now well recognised that there are many more people suffering from treatable mental illness than are treated by mental health services. The World Health

Organisation's research into the prevalence of psychological problems in primary care practice found that an average of 25% of a worldwide sample presented with clinically significant symptoms⁷. The Australian National Survey of Mental Health and Well-Being estimated the prevalence of ICD-10 diagnosis to be 13.5% in the general population⁸. A recent British survey found that 16% of the general population had experienced a neurotic disorder in a 12-month period and that by including functional psychosis, alcohol and drug dependence the rate was 23%⁹. It is generally acknowledged that the majority of people with psychological disorders do not receive specialised mental health treatment^{10,11}. General population epidemiological research has also identified that only a small percentage of those who should receive treatment do receive it¹².

These rates are derived from measures that also identify sub-clinical symptomatology. Given that there is evidence that people with sub-threshold symptoms have an increased risk of developing clinical syndromes¹³, mental health services are faced with the complex issue of how to provide an appropriate mix of services. There is often a conflict between providing direct services to people with clear clinical syndromes as well as preventative and early intervention measures to the large numbers of clients who are at significant risk of developing a clinical syndrome.

Mental health specialists often dismiss those who are untreated in the community as “the worried well” despite the growing evidence that they have significant clinical syndromes. In Australia, at the moment, there is a growing debate about the focus of mental health services. There is increasing focus on primary mental health care initiatives such as mental health promotion and prevention but access to clinical services is progressively becoming restricted to those with “serious mental illness”. The issue is most often framed as **either** clinical treatment **or** community development. The challenge for communities, services and governments is to determine whether it is possible to develop a “**both/and**” frame to this whole issue.

This challenge is particularly relevant to rural and remote areas in Australia. American studies have found that there does not appear to be any significant difference in the prevalence of mental illness in rural compared to urban areas. The Australian National Survey on Mental Health and Well-Being has found slightly lower mean scores on the General Health Questionnaire for people living in rural areas¹⁴ compared to urban settings.

Nonetheless, access to specialist services in rural areas is much more limited than in urban centres^{15,16}. This leads to a classic demand and supply dilemma for rural communities. As a consequence non-mental health professionals in rural areas are much more likely to be treating people with mental illness. In some situations this is quite appropriate but most non-mental health professionals in rural areas find this client population to be very difficult. Additionally, many people in rural communities do not disclose psychological problems to local professionals because of the continuing stigma of “mental illness”. As a result the level of effective treatment being provided to people in rural areas with treatable conditions is probably lower than in urban communities.

The main approaches to providing ongoing and personal care in rural communities have tended to focus on primary care models of service delivery^{17,18}. Throughout the world there is an increasing exploration of how to use the existing community resources and

networks to support and treat people with psychological problems^{19,20}. These approaches range from training non-mental health professionals in mental health interventions to developing and professionally supporting the informal networks of care²¹⁻²⁵.

Some estimates suggest that 60% of all patients of general practitioners have some level of disabling psychological problem²⁶. For the last 10 years there has been a considerable amount of interest in all aspects of this startling fact. This has included extensive epidemiological surveys throughout the world²⁷⁻³⁰ focusing on the types of psychological problems that are seen by primary care physicians. There is evidence that general practitioners are not well equipped to recognise psychological disorders in their patients^{31,32} and there have been efforts to identify whether models of training for general practitioners can improve recognition and treatment for these patients³³. There is clear evidence that recognition by itself does not improve outcomes for patients if the general practitioner does not have skills in treatment³⁴.

One of the most common models that has been suggested to address the issue of under-recognition and treatment of psychological disorders by general practitioners, and the volume of clients to be cared for, is that of shared care with mental health specialists³⁵. The benefits of shared care are not established with any certainty^{36,37,38} though the Australian experience has largely been positive³⁹.

There are few studies of these issues in specific to general practitioners in rural areas despite the clear recognition that the burden of psychological care in rural areas largely fall to rural general practitioners because they have less access to specialist services⁴⁰. Most empirical studies that examine primary care practice in rural areas have focused on specific disorders, particularly depression^{41,42}, or simply highlight the clinical demographics in a particular area⁴³.

There are a less than a handful of papers that focus on the broad issue of mental health in rural primary care practice in the Australian context^{44,45,46} and only one which looks at the issue of rates of mental health presentations to general practitioners⁴⁷. This paper looked at the issue based on the reports of the general practitioner about their case loads and there do not appear to have been any epidemiological studies of psychological disorder in the Australian rural general practice population.

About five years ago the community in the North East of Tasmania implemented a new model for local mental health care⁴⁸. The “Scottsdale Model” was developed when a general medical practice in the rural community of Scottsdale employed a mental health specialist under a Commonwealth grant through the Northern Division of General Practitioners. The role of this person has been to:

- ◆ provide direct clinical service to members of the community;
- ◆ provide consultancy on mental health conditions to the local medical practitioners;
- ◆ respond to mental health emergencies; and
- ◆ educate the professional and general community on mental health issues.

The original project was developed because there were a large number of people in the area experiencing high levels of stress. This resulted in an upsurge in the frequency of mental health problems and completed suicides in the district.

The service was initially described in the community as a “grief and stress counselling service exploring the needs of the local community, and assisting other primary health care providers with effective strategies to manage these problems at a local level.”

The clinical model chosen to fulfil these aims was a “crisis intervention” model. This process was chosen because it allowed for focused and brief interventions which actively involved the “consumer” in their own care. The goal of the crisis intervention process is to provide an immediate plan of action to reduce suffering and emotional pain with the aim of restoring sufficient equilibrium to enable a return to everyday levels of functioning. The crisis intervention model usually requires sessions of 45–60 minutes duration with an average of 3 to 5 sessions per person.

In addition, the mental health worker in this position provided ongoing liaison and consultation with local service providers. Presentations on mental health issues were held on a regular basis with local service groups and support organisations. The broader community was exposed to education and information about mental health through regular articles in the local newspaper.

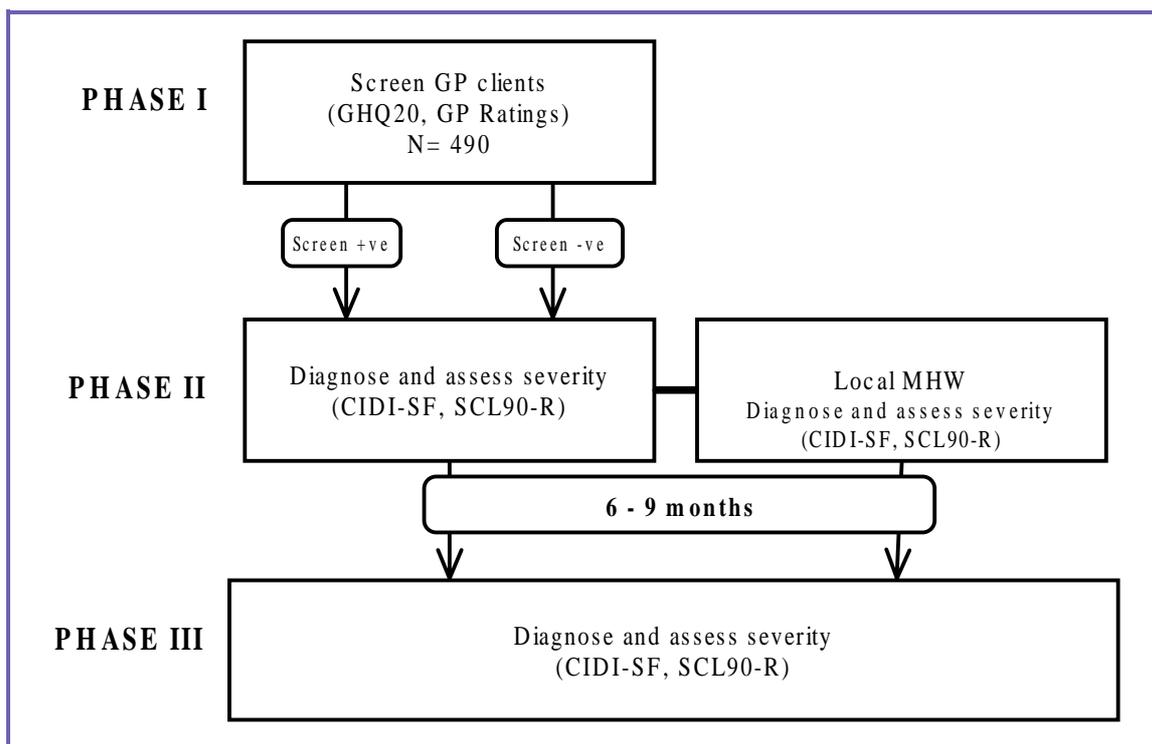
In 1999 the University Department of Rural Health (UDRH), University of Tasmania, was asked to add to this model of mental health service delivery by including mental health as part of the program for the education of undergraduate medical and allied health student in rural areas. The aim of this was to increase awareness of rural mental health issues early on in the educational process. In addition, the UDRH was asked to provide an evaluation of this model of mental health service delivery to rural/remote areas. This created the opportunity to look in more detail at the prevalence and course of psychological problems for rural Tasmanians.

This paper describes the broad approach to the research and introduces some of the preliminary results from the first phase of a two-stage epidemiological design⁴⁹.

METHODOLOGY

The quantitative research for this project has been divided into three phases. The first phase was an assessment of patients in general practice on a number of measures including the 20-item General Health Questionnaire (GHQ-20)⁵⁰. This group of patients were presenting for general medical care and were not specifically identified as having psychological problems. The second phase will involve a more complete diagnostic assessment of this group of patients and the collection of the same data on a separate group of clients being seen by the local mental health worker. The final phase will be a follow up assessment of both the community sample and the clients of the local mental health worker. A schematic of the prospective design is presented in Figure 1.

Figure 1 Schematic of methodology for research



This design will enable us to look at the prevalence people with psychological problems presenting to rural GP practices and compare it with results from Australian and international data sets. It also makes it possible to look at local prevalence of psychological problems across a number of rural Tasmanian communities. This comprehensive approach to the methodology will provide very useful data for both service planning and future needs analysis.

The initial screening stage should yield at least three groups of clients:

- ◆ those with no psychological disorder;
- ◆ those with a psychological disorder but receiving no specialist treatment; and
- ◆ those with a psychological disorder and receiving “as usual” treatment by the local mental health service.

This establishes a multi-dimensional comparison population against which clients presenting to the co-located mental health worker will be compared using a range of measures of mental health and disability.

The final stage of the research allows a comparison to be made of the course of the disorders for people under the various conditions described. This enables quite substantial conclusions to be made about the causal effects of intervention by the mental health worker compared to the other conditions.

Following approval of the research proposal by the Ethics Committee of the University of Tasmania, phase I of the research was completed in August 2000. Five GP practices

agreed to participate in the study — North East (Scottsdale), East Coast (St Helens and St Marys), and North West (Smithton).

During June and July of 2000 the receptionists in each of the surgeries approached clients waiting to see their GP and asked them to complete the “How Are You Feeling Survey”. This survey consisted of some basic demographic information such as gender, age range, and employment status, a question of whether the person was being treated for a chronic medical condition, and the 20-item General Health Questionnaire (GHQ20)⁵¹. In addition, the general practitioners were asked to globally rate the physical and psychological well-being of the client and to indicate whether a mental health referral occurred and what sort of treatment they provided in that consultation.

PRELIMINARY RESULTS

Overall, 490 people completed the initial questionnaire. The results reported here are the first basic analysis of this data. There is much more that can be done with this initial data set but this discussion will focus on the demographic comparisons and the global GP ratings.

Of the 490 people who completed the survey 168 (34.3%) were from the North East, 251 (51.2%) were from the East Coast, and 71 (14.5%) were from the North West.

The gender ratio was 322 (65.7%) female and 154 (31.4%) male. A high percentage of clients indicated that they were willing to be involved in further research with 347 (70.8%) saying “yes” and 117 (23.9%) saying “no”.

On the GHQ 322 (65.7%) of clients scored below the cut-off point for “caseness” and 168 (34.3%) scored above that point. Therefore, one third of the clients were identified as having a degree of psychological disturbance.

Table 1 presents the means scores on the GHQ and on both GP rating scales across the demographic categories. There were no effects of gender for any of the scales. On the GHQ there were no effects for age but there was a significant main effect due to occupational status ($F=3.205$, $df= 6/457$, $P<0.05$). This was largely accounted for by people in the disabled category scoring significantly higher than people in the other categories.

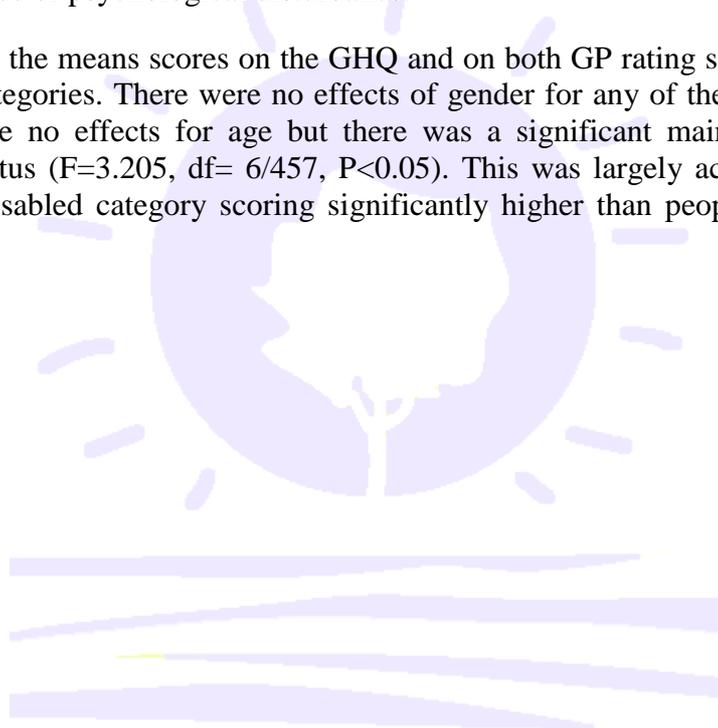


Table 1 Mean GHQ20 and GP ratings scores for the total sample by demographic categories (N=490)

	Mean GHQ, (s.e.), n	Mean physical rating, (s.e.), n	Mean psychological rating, (s.e.)
Gender			
Male	3.40, (0.39), 154	68.2, (1.73), 144	73.9, (1.78)
Female	3.91, (0.28), 322	69.1, (1.22), 313	69.7, (1.29)
Age Range(years)			
16–25	3.98, (0.59), 55	76.1, (2.52), 51	74.6, (3.03)
25–35	4.09, (0.65), 70	70.4, (3.21), 65	72.3, (3.16)
35–45	3.75, (0.47), 105	74.2, (1.95), 103	73.7, (2.15)
45–65	4.12, (0.42), 177	64.2, (1.64), 169*	67.6, (1.72)
65–75	2.02, (0.51), 54	67.0, (2.53), 54*	71.8, (2.88)
75+	2.30, (0.76), 20	59.3, (4.46), 20*	70.0, (4.40)
Occupational category			
F/T Employed	3.68, (0.44), 114	72.0, (2.24), 108	73.7, (2.39)
P/T Employed	3.61, (0.54), 90	74.1, (1.99), 86	76.0, (2.05)
Unemployed	4.65, (0.80), 48	69.5, (3.57), 46	67.8, (3.34)
Disabled	6.42, (1.08), 33*	54.6, (3.29), 32*	59.5, (4.64)*
Home duties	3.62, (0.64), 118	69.0, (3.07), 49	68.0, (3.45)
Retired	2.53, (0.39), 118	65.7, (1.80), 118*	71.0, (1.72)
Other	-	-	-

*Significantly different ($p < 0.05$) from the first category, which is taken as the reference.

A similar pattern for occupational status is seen with GP ratings of physical ($F=2.43$, $df=6/441$, $P < 0.05$) and psychological ($F=2.94$, $df=6/441$, $p < 0.01$) well-being with the scores of the disabled group being significantly lower than for the other groups. On ratings of physical well-being, people in the retired group were also scored significantly lower than the other groups.

There were no significant effects for age on ratings of psychological well-being but there was a strong main effect for physical well-being ($F=5.20$, $df=5/461$, $P < 0.05$) which was due to those people in the older groups being rated lower than those in the younger groups.

A little less than half (46%) the sample reported that they were being treated for one or more chronic medical conditions. Because there were a number of categories where there were fewer than 10 people identified with a particular condition the categories were collapsed to identify whether people had none, one, or more than one chronic medical condition.

The comparison of the scores on the GHQ and the GP ratings for the different categories of medical condition can be seen in Table 2. The only significant effect is with regard to the GP ratings of physical well-being ($F=15.47$, $df=2/469$, $p < 0.05$) and was due to those with multiple conditions scoring lower than those with one condition who also scored lower than those with no reported condition.

Table 2 Mean GHQ20 and GP ratings scores for the total sample by medical condition (N=490)

	Mean GHQ, (s.e.), n	Mean physical rating, (s.e.), n	Mean psychological rating, (s.e.)
Chronic medical condition			
Diabetes	-	-	-
Blood pressure	3.20 (0.65), 60	69.3 (2.50), 57	72.6 (2.60)
Asthma	3.09 (1.00), 22	72.2 (5.68), 21	77.8 (3.93)
Stroke	-	-	-
Heart trouble	3.10 (1.99), 10	59.3 (9.16), 10	63.5 (10.65)
Breathing problems	-	-	-
Cancer	-	-	-
Arthritis	4.47 (1.07), 32	56.6 (3.43), 30	61.9 (3.69)
Other	6.5 (1.64), 16	64.3 (4.98), 16	65.4 (6.43)
Multiple conditions	3.45 (0.54), 71	59.1 (2.10), 71	67.3 (2.39)
No chronic problem	3.85 (0.30), 264	73.4 (1.36), 250	72.23 (1.5)
Number of medical problems			
One condition	3.65 (0.43), 155	65.4 (1.74), 149	70.7 (1.76)
Multiple conditions	3.45 (0.54), 71	59.1 (2.10), 71*	67.3 (2.39)
No condition	3.85 (0.30), 264	73.4 (1.36), 250*	72.2 (1.50)

* Significantly different ($p < 0.05$) from the first category, which is taken as the reference.

The general practitioners participating in this study also noted whether they had made a mental health referral at the end of the consultation. A number of choices were available including referral to private psychiatrists, community social work, local mental health worker, or a visiting mental health psychiatrist. However, only twenty clients were referred for treatment at the end of the consultation so the only analysis that can realistically be made is of those who were referred and those who were not. No finer grained assessment can be made.

Table 3 Mean GHQ20 and GP rating scores for the total sample by medical decisions (N=283)

	Mean GHQ, (s.e.), n	Physical ratings, (s.e.)	Psychological ratings(s.e.)
GP mental health referral			
Referred	8.00 (1.71), 20	61.25 (5.63), 20	43.9 (5.39)
Not referred	3.48 (0.3), 244*	70.3 (1.42), 244*	73.5 (1.45)*
GP treatment			
Combined counselling/medical	6.31 (0.86), 67	63.0 (2.76)	46.5 (2.83)
Medical only	3.25 (0.34), 162*	66.2 (1.78)	75.4 (1.47)*
No treatment needed	3.78 (0.72), 54*	75.7 (3.09)*	76.1 (3.38)*

*Significantly different ($p < 0.05$) from the first category, which is taken as the reference

The general practitioners were also asked to indicate what sort of treatment they had provided. This could include no specific treatment, a medical treatment, a counselling treatment, or a combination of medical and counselling. Again, due to there being low numbers in the combined category it was decided to collapse this with the counselling category to make up a larger combined category.

The comparisons of scores on the GHQ and GP ratings for category of referral and GP treatment can be seen in table 3.

From this it can be seen that there is a significant effect on GHQ for both referral ($t=3.88$, $df=262$, $p<0.05$) and GP treatment ($F=8.14$, $df=2/282$, $p<0.05$). The GHQ for those people referred for further treatment was very much greater than for those who do not receive a referral. Additionally, the GHQ scores for those receiving some level of counselling from their GPs were significantly higher than the scores for those receiving medical treatment alone or no specific treatment.

A very similar pattern is repeated for both ratings of physical and psychological wellbeing with regard to referral and treatment. Those clients who were referred were rated as significantly less physically well ($t=-1.73$, $df=262$, $p<0.05$) and much less psychologically well ($t=-5.61$, $df=262$, $p<0.05$) than those who were not referred.

Those clients who received a counselling form of treatment received much lower physical well-being scores than those who received no treatment ($F=5.06$, $df=2/282$, $p<0.05$) and the same group had very much lower psychological well-being scores than either of the other two groups ($F=48.98$, $df=2/282$, $p<0.05$).

Relationships between GHQ20 and GP ratings

There are significant correlations between the GHQ20, the GP physical ratings and the GP psychological ratings. These are presented in Table 4. It should be noted that the negative direction of the correlations between the GHQ20 and the two GP rating scales are due to the opposite directions of measurement on the two scales. On the GP ratings a higher score indicates higher well-being whereas a higher score on the GHQ20 indicates a higher likelihood of psychological disorder.

Table 4 Correlations between the GHQ and the GP rating scales

N=470	GP rated physical well-being	GP rated psychological well-being
GHQ20	-0.235**	-.423*
GP rated physical well-being		.510*

* $p<0.01$ ** $p<0.001$

The relationship that is apparent between the GHQ and the GP ratings can also be seen in Table 5 which compares the GP ratings of physical and psychological well-being for those screening negative on the GHQ to those screening positive on the GHQ. As can be seen, those who are identified as positive “cases” have significantly lower ratings on physical well-being ($t=6.73$, $df=282$, $p<0.05$) and psychological well-being ($t=4.81$, $df=282$, $p<0.05$).

Table 5 Mean GP rating scores for the total sample by GHQ screening (N=470)

GHQ screen	Physical ratings, (s.e.), n	Psychological ratings(s.e.)
Screen -ve	72.13 (1.06), 306	75.9, (1.01)
Screen +ve	62.32, (1.96), 164*	61.8, (2.14)*

*Significantly different ($p<0.05$) from the first category, which is taken as the reference.

SUMMARY

The purpose of this paper has been to introduce the research project that is currently being undertaken by the UDRH in Launceston, Tasmania.

There is a considerable amount of evidence that the rates of significant psychological problems are very high in the general community. These rates increase dramatically when the population consists of patients presenting to their general practitioner. The rates seem to be consistent throughout the world and are generally the same in rural and urban areas. Unfortunately, there is little empirical replication of these figures for rural populations in the Australian situation.

The preliminary results of our research confirm that a large number of patients presenting to their general practitioner in a rural setting have a significant degree of psychological disturbance.

The other measures of patient well-being that were introduced in this study were two GP rating scales of psychological and physical well-being. These measures were two simple likert scales identified at each pole by the statement “Extremely Unwell” versus “Extremely Well”. The GPs were instructed to place a mark somewhere along each line to reflect their global judgement of the patient’s condition during the consultation.

The data presented suggest that these simple measures were very sensitive to the client’s psychological and physical wellbeing. The physical well-being scale accurately reflected the patient’s self-reported physical condition. Both scales had reasonable correlations with the GHQ but the psychological well-being scale had a greater degree of correlation than the physical well-being scale.

The validity of these two scales is further supported by their sensitivity to differences in the groups based on the GPs’ treatment decisions. Again, the psychological well-being scale is much lower than the physical well-being scale for those groups receiving some form of counselling though both are significantly lower than for the other groups. On the whole it seems that the GPs’ ratings of their patients were accurate and sensitive reflections of the patients physical and psychological status.

It was somewhat surprising that only 20 patients were referred for more specialised mental health service particularly given the number of patients who were identified by the GHQ as having problems. There was a considerable amount of missing data for this item and it may be that many more clients were actually referred on but that this was not recorded. Nonetheless, those clients who were referred had extremely high GHQ scores and so probably represented a significantly more disabled population.

It may also be that the low referral rate is an accurate reflection of the lack of availability of specialist services in rural areas and that only the most severe cases are passed on. The next stage of patient follow up and data collection should assist in clarifying this issue.

At this stage, the data provides us with pointers to further analyses and investigations that we need to pursue. Some of this will follow naturally as we gather more data on the patients who agree to be followed up. Those people will complete the Composite

International Diagnostic Interview — Short Form^{52,53} (CIDI-SF) and the Symptom Checklist 90 — Revised⁵⁴ (SCL90-R) to allow an assessment of diagnosis and severity of any psychological problems. This sample will then be compared as a “control” to the clinical sample collected by the mental health clinician.

In conclusion, this study has screened a substantial number of patients presenting to their GPs in rural parts of Northern Tasmania. We have found that a large number of these patients have some degree of psychological disturbance. The rate is somewhat higher than in some other studies but it is within the range reported elsewhere. This data supports the belief that there are a significant number of psychologically disturbed people seeking support and treatment from their GP in rural areas.

We have also found that some simple scales for GPs have a good level of validity in reflecting the psychological and physical well-being of their clients. This will be followed up throughout the next phases of the study to see whether such simple tools may be useful for GPs in rating and tracking their patient’s well-being. The link between these scales and a well-developed scale like the GHQ is certainly a promising start.

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