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**Australian and Maltese Teachers' Perspectives about their Capabilities for  
Mental Health Promotion in School Settings**

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## **Australian and Maltese teachers' perspectives about their capabilities for mental health promotion in school settings**

### **Abstract**

There is international concern about the prevalence and severity of mental health difficulties and the impact such difficulties have upon individuals, families, communities and societies. Policy makers identify schools as strategic settings for promoting students' positive mental health, such as through the explicit teaching of social and emotional skills. Promoting students' mental health requires teachers to possess particular types of subject-matter knowledge, pedagogical knowledge, and knowledge of learners and their characteristics. However, mental health promotion is not typically addressed in pre- or in-service teacher education, thus raising questions about teachers' capabilities to enact policy directives for mental health promotion in schools. This paper reports a questionnaire study of 1029 Australian and Maltese teachers' perspectives about their capabilities for mental health promotion. Multilevel modelling showed significant response variations between teachers and between schools on 11 outcome factors. Maltese teachers' responses were significantly lower than Australian teachers on three outcome factors, namely, Knowledge, Teaching Resources and providing Parenting Support. Differences were also apparent between teachers of secondary and primary students, and between male and female teachers. Years of teaching experience did not show significant effects, highlighting that mental health promotion is a new area of professional learning for teachers. This study indicates that policy directives that situate mental health promotion initiatives in educational settings must be accompanied by opportunities for teachers and schools to build their capabilities in this relatively new domain of school and teacher responsibility. Our participating teachers have reported on issues of international concern, indicating that further attention to the capabilities of teachers and schools for mental health promotion in diverse cultural settings is warranted.

**Key words** mental health promotion; social and emotional education; teachers' professional learning; teacher knowledge; teacher self-efficacy; hierarchical linear modelling

# **Australian and Maltese teachers' perspectives about their capabilities for mental health promotion in school settings**

## **1. Introduction**

Each year, Oct 10<sup>th</sup> is World Mental Health Day: A day for global mental health education, awareness and advocacy (WFMH, 2007). This public profile of mental health promotion demonstrates that there is international concern about the prevalence and severity of mental health difficulties and the impact such difficulties have upon individuals, families, communities and societies.

In everyday usage, the term 'mental health' can be ambiguous, as in some quarters this term has come to mean mental ill-health. This paper adopts the WHO definition of mental health, which highlights that mental health is a positive state:

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. The positive dimension of mental health is stressed in WHO's definition of health as contained in its constitution: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (WHO, 2013a, p.1)

Policy makers identify schools as strategic settings for promoting students' positive mental health, such as through the explicit teaching of social and emotional skills. Promoting students' mental health requires teachers to possess particular types of subject-matter knowledge, pedagogical knowledge, and knowledge of learners and their characteristics. However, mental health promotion is not typically addressed in pre- or in-service teacher education, thus raising questions about teachers' capabilities to enact policy directives for mental health promotion in schools. In this emerging curriculum domain, little is known about teachers' knowledge and confidence for mental health promotion. However, policy makers, curriculum designers and school leaders need information about what can be reasonably expected from the teachers who will eventually become responsible for enacting mental health promotion initiatives.

Furthermore, as concerns about mental health cross international boundaries, information from international contexts has the potential to be more informative than information from one context only. Cross cultural research is useful for the development of theories that can be applied more generally across different contexts. This contributes to the diffusion of global knowledge. It also helps researchers and educators to evaluate their own policies and practices in comparison to those in different cultures, identifying their strengths and weaknesses, and using the knowledge gained from other contexts to improve their own policies and practices. On the other hand it also draws our attention to the need for cultural sensitivity in importing frameworks and practices from different cultures without first exploring the needs of the particular contexts. Recognising the value of cross cultural research, this paper reports an investigation into Australian and Maltese teachers' perspectives about their capabilities for mental health promotion. The purpose of this paper is to contribute evidence from key players in the delivery of mental health promotion initiatives in educational settings, namely teachers, with a view to better

understanding facilitators and barriers to program implementation.

## **2. Mental health is an issue of contemporary international concern**

There is strong evidence that resources do need to be directed towards mental health promotion. The World Health Organisation (2013a) reported that around 20% of the world's children and adolescents are estimated to have mental disorders or problems, with about half of mental disorders beginning before the age of 14, and with similar types of disorders being reported across cultures. In 1999 the US Surgeon General released the department's first ever report on the topic of mental health and mental illness, explicitly acknowledging that mental health is fundamental to health (DHHS, 1999). The report documented that mental disorders in the US collectively accounted for more than 15 percent of the overall burden of disease from all causes and slightly more than the burden associated with all forms of cancer. Furthermore, some estimates suggested that up to 70% of young people who have mental health support needs did not access mental health services (DHHS, 1999). According to the recent 2013 report by the US Centre for Disease Control and Prevention (CDC) (Perou et al., 2013), the prevalence of mental health difficulties in children and young people has been increasing in the last twenty five years, with 13 to 20% of American children and teenagers suffering from mental health difficulties in a given year. Statistics from the CDC for the period 2005-2011 indicate that attention-deficit/hyperactivity disorder (6.8%) was the most prevalent parent-reported current diagnosis among children aged 3–17 years, followed by behavioral or conduct problems (3.5%), anxiety (3.0%), depression (2.1%), autism spectrum disorders (1.1%), and Tourette syndrome (0.2% among children aged 6–17 years). Approximately 8% of adolescents aged 12–17 years reported 14 or more mentally unhealthy days in the preceding month. During the same period as the CRC surveillance, Merikangas et al. (2010) reported results from the administration of the National Comorbidity Survey–Adolescent Supplement NCS-A, which is a nationally representative face-to-face survey of 10,123 adolescents aged 13 to 18. Participants' mental health was assessed using a modified version of the fully structured WHO Composite International Diagnostic Interview. Merikangas et al. found that anxiety disorders were the most common condition (31.9%), followed by behavior disorders (19.1%), mood disorders (14.3%), and substance use disorders (11.4%), with approximately 40% of participants with one class of disorder also meeting criteria for another class of lifetime disorder. The overall prevalence of disorders with severe impairment and/or distress was 22.2% (11.2% with mood disorders, 8.3% with anxiety disorders, and 9.6% behavior disorders). The median age of onset for disorder classes was earliest for anxiety (6 years), followed by 11 years for behavior, 13 years for mood, and 15 years for substance use disorders. The study indicates that approximately one in every four to five youth in the US meets criteria for a mental disorder (with severe impairment) across their lifetime. The authors observed that the likelihood that common mental disorders in adults first emerge in childhood and adolescence highlights the need for a transition from the common focus on treatment to that of prevention and early intervention. An estimate of the annual economic cost of mental illness in young people in the US is \$247 billion (O'Connell, Boat, & Warner, 2009; Perou et al., 2013).

In this paper we report a study undertaken in Australia and Malta, where the prevalence of mental health difficulties in those two countries show similarity with reports from the US. For example, Slade et al. (2009) reported results from the 2007

National Survey of Mental Health and Wellbeing conducted by the Australian Bureau of Statistics. The survey was designed to estimate the prevalence of common mental disorders defined according to clinical diagnostic criteria, as directed by both the International Classification of Diseases 10th Revision (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV). The results showed that one in five Australians experienced mental illness in the 12 months preceding the surveys, and that almost half of the population experienced a mental disorder at some point in their lifetime. The highest reported prevalence of mental health difficulties in the Australian sample, just over one in four (26.4%), was in the age group 16-24 years.

Sawyer et al. (2007) reported the child and adolescent component of that national Australian study, focusing upon mental disorders in 4-17-year-old children and youth. Parents completed the parent-version of the Diagnostic Interview Schedule for Children Version IV, the Child Behaviour Checklist, and standard questionnaires to assess health-related quality of life and service use. The Youth Risk Behaviour Questionnaire was completed by adolescents. The authors found that 14% of children and adolescents were identified as having mental health problems. Many of those with mental health problems had problems in other areas of their lives and were at increased risk for suicidal behaviour. Only 25% of children and youth with mental health problems had attended a professional service during the six months prior to the survey.

Meanwhile, in Malta, results from the 2008 European Health Interview Survey amongst the population of 15 year olds and over reported that during the 4 weeks preceding the interview the majority of respondents experienced positive feelings. However, 11.5% felt tired, 17.6% reported being nervous, and 5.6% felt depressed all the time or most of the time. By way of comparison, OECD member countries' average rates were 18% for feeling tired, and 8% for feeling depressed all or most of the time. Lifetime and 12 month prevalence rates of mental disorders for Malta were amongst the lowest OECD member countries (DHIR, 2008), but nevertheless were identified as issues of national concern. In a national study about students with social, emotional and behaviour difficulties in Malta, taking 10% of the whole school population in the country, (Author, 2008) found that 10% of children and young people were experiencing social, emotional and behavioural difficulties, with higher prevalence amongst secondary school pupils and amongst male students, particularly for behavioural problems. In a follow up study with primary school children, 10% of children were identified as being at risk of developing mental health difficulties (Author, 2011)

### **3. Promoting mental health in schools**

Contemporary social-ecological perspectives conceive that protective factors for developing positive mental health, (and avoiding mental health difficulties), reside in each person's psychological world, family contexts (e.g., effective parenting), and environments (e.g., communities and schools) (Graetz et al., 2008; WHO, 2013b). Initiatives to promote positive mental health and prevent mental ill-health typically follow a medical model, with interventions at three broad levels, namely primary (whole population), secondary (at risk populations) and tertiary (populations with existing difficulties) (Rowling, 2007; Stewart-Brown, 2006). Advocates such as the WHO (2013b), the US based Collaborative for Academic and Social and Emotional

Learning (CASEL, 2013), the European Network for Social and Emotional Learning (ENSEC, 2009), and beyondblue: the national depression initiative in Australia (2013) recommend schools and early childhood centres as strategic settings for promoting mental health, largely at the whole population level (e.g., social and emotional education for all children), and also to some degree for at-risk students (e.g., special programs for students from low socio-economic backgrounds), and identified students (e.g., establishing referral pathways).

Schools are familiar with being charged with undertaking population-level health promotion interventions, such as promoting exercise, good nutrition, drug, sex and HIV Aids education (WHO, 2013c). The Declaration of Alma-Ata in 1978 (WHO, 1978) and the subsequent Ottawa Charter for Health Promotion (WHO and Health and Welfare Canada, 1986) drew attention to the effect of the environment on health, and consequently advocated a settings approach to health promotion. During the 1990s, the WHO, working jointly with the European Commission and the Council of Europe, developed the health promoting schools initiative (Stewart-Brown, 2006), which is a multifactorial approach that covers teaching health knowledge and skills in the classroom, changing the social and physical environment of the school, and creating links with the wider community.

As noted by Brown and Bowen (2008 p. 29) schools are “an ideal point of entry for delivering universal and preventive services that address a variety of factors affecting children’s physical and mental health”. Schools are central in the lives of youths and families (Pullmann, Bruns, Daly, & Sander, 2013) and have major strengths for delivering population health initiatives, such as access to most children and youth over long periods of time and staff who are attuned to students’ behaviours and needs (Greenberg, Domitrovich, & Bumbarger, 2001; Greenberg, Domitrovich, Graczyk, & Zins, 2005; Peth-Pierce, 2000; Weare & Gray, 2003; Weare & Nind, 2011).

Nowadays, many schools provide the settings for major *mental* health policy initiatives across a range of countries. Typically this revolves around components such as building positive school communities, explicitly teaching to enhance students’ social and emotional competencies, working with parents/carers to support them to support their children’s mental health, and establishing efficient and effective early referral and intervention services for students identified as being at risk of mental health difficulties (Lendrum, Humphrey, & Wigelsworth, 2013). The underlying principles of these approaches are ‘competence enhancement’ (Fledderus, Bohlmeijer, Smit, & Westerhof, 2010) and “fostering individual and social resources” (Kobau et al., 2011).

For example, the United Kingdom Department for Education National Strategies document advises that, “Social, emotional and behavioural skills underlie almost every aspect of school, home and community life, including effective learning and getting on with other people (DCSF, 2009). Similarly, the proposed introduction of the Academic, Social, and Emotional Learning Act in the US seeks to embed the provision of social and emotional education in school curricula (CASEL, 2013). The Council of Australian Government’s National Action Plan for Mental Health 2006–2011 (COAG, 2010) and the recent Roadmap for National Mental Health Reform 2012–2022 (COAG, 2012) identified promotion, prevention and early intervention for positive mental health as essential actions. Currently, the Australian Commonwealth Department of Health and Ageing funds the MindMatters secondary schools and

KidsMatter primary schools mental health promotion initiatives in all Australian states and territories. In addition, 111 Australian early childhood and long-day-care centres have recently completed a KidsMatter initiative for children from birth to school age (KidsMatter, 2012). Similarly, the Maltese National Curriculum Framework (MEEF, 2012) emphasises the development of children's well-being and self-esteem as part of the mandate for mainstream education. Personal and social development is a subject taught at secondary school levels and to a limited extent in the junior primary school. At the primary school level, Circle Time, which is a universal intervention for social and emotional learning, and Nurture Groups, which are a specialist provision for students at risk of mental health, have been introduced in a number of primary schools in the country over the past decade (Author, 2013).

#### **4. Outcomes of school-based mental health promotion initiatives**

Reports indicate that well-designed school-based programs that are well-implemented can have positive impacts on students' mental health (Adi, Killoran, Janmohamend, & Stewart-Brown, 2007; Greenberg, 2010; Weare & Nind, 2011). For example, a review by Wells, Barlow and Stewart-Brown (2003) identified evidence of effectiveness for programs that adopted a whole-school approach, were implemented continuously for more than a year, and were aimed at the promotion of mental health as opposed to the prevention of mental illness. Later, Durlak, Weissberg, Dymnicki, Taylor and Schellinger's (2011) meta-analysis of 213 social and emotional learning programs (a component of mental health promotion programs) in schools illustrated that, compared to controls, participants demonstrated significantly improved, social and emotional skills (22% improvement), attitudes (9% improvement), positive social behaviour (9% improvement), conduct problems (9% improvement), emotional distress (9% improvement), and academic attainment (11% improvement). Similarly, Sklad, Diekstra, de Ritter, Ben, and Gravesteyn (2012) undertook a meta-analysis of 75 social and emotional intervention studies published between 1995 and 2008. Their analysis determined improvements in social and emotional skills (26% improvement), anti-social behaviour (17% improvement), mental disorders (8% improvement), positive self-image (18% improvement), pro-social behaviour (15% improvement), academic attainment (18% improvement), and substance abuse (4% improvement).

However, not all mental health promotion initiatives have led to identifiable positive outcomes. A recent review by Lendrum, et al. (2013) suggested that mental health prevention and promotion interventions can be effective in primary school settings, however there are different, and as yet unresolved, challenges to the effective implementation of mental health programmes in secondary school settings. Lee et al. (2008) warned of dangers when programs that have been tested in relatively controlled, highly resourced trials are broadly rolled-out to settings with fewer resources and limited controls over implementation processes. Humphrey, Lendrum and Wigelsworth (2010) argued that disappointing findings from the Social and Emotional Aspects of Learning (SEAL) program in the UK appeared to be related to lack of structure and consistency in social and emotional education programs, unmonitored delivery, and an inadequate level of human and financial resources. Similarly, Melhuish et al. (2007) argued that the Sure Start local programs in the UK were plagued by flexible program description and implementation that had the potential to leave practitioners with little guidance about how to act. Weare and Nind's (2011) analyses of the way that loosely structured intervention approaches could be variously interpreted and applied, by teachers with different background



knowledge and experience, in different contexts, highlights the influential roles of teachers in the delivery of school-based mental health promotion initiatives.

## **5. Teachers are at the core of promoting mental health in schools**

Typically, school reform and renewal requires changes that require school leaders and teachers to act as mediators between policy directives and delivery to students in classrooms. School change is multidimensional and involves all aspects of the school, including curriculum design, pedagogical strategies, beliefs, developing capacity, and organisational and institutional structures (Senge, 1990; Waks, 2007).

Cuban (1988) argued that first-order change in organisations aims to improve efficiency and success of what currently exists in schools. However, second-order change, (which is more difficult according to Hargreaves, 1997) endeavours to transform the structure of the school, the roles of those involved, belief systems and the curriculum. Promoting students' mental health as part of the school curriculum is arguably at the second order of change. Second order change requires support from school leaders and engagement from teachers. Fullan and Stiegelbauer (1991) argued that successful change at the individual teacher level reflects three components: provision of *materials*, *strategies* (student, class, whole school, community) and *beliefs*, with teacher beliefs driving the actual change or initiative. The development of productive strategies and beliefs that are amenable to change are arguably built upon access to opportunities to develop good quality knowledge for teaching, such as subject-matter knowledge, pedagogical content knowledge, and knowledge of students and their characteristics, as canvassed in a large corpus of literature about teachers' knowledge (e.g., Feiman-Nemser, 2001; Fenstermacher & Richardson, 2005; Grossman, 1995; Grossman & Stodolsky, 1995; Munby, Russell, & Martin, 2001; Shulman, 1986b, 1987). With the development of good quality knowledge for teaching, teachers are well-placed to have successful experiences, and in-turn, to develop good self-efficacy and agency for teaching. Good self-efficacy promotes an "I can" approach to tasks, and in turn promotes positive agency, which promotes an "I will" approach (Bandura, 1997, 2001).

However, a scoping survey of mental health promotion initiatives in England by Vostanis, Humphrey, Fitzgerald, Deighton, and Wolpert (2012), involving 599 primary and 137 secondary schools, found that teacher training and consultation were relatively limited. If teachers lack the knowledge and confidence to deliver program components, then issues of implementation quality (such as dosage, fidelity and engagement with program goals) are likely to suffer (Domitrovich et al., 2008; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009). The loss of fidelity as programs are upscaled from trials to broader roll-out is likely to negatively impact upon the achievement of the expected outcomes (Durlak & DuPre, 2008). Lack of fidelity may be accidental or intentional, as teachers adapt programs to their own capabilities, needs and contexts, or may result from barriers to implementation at programme, organisation or implementer levels (Lendrum et al., 2013).

Programs such as SEAL (DCSF, 2009) in England, KidsMatter (2012) in Australia, and Personal and Social Development and Circle Time in Malta, do rely upon teachers to deliver multiple components of the initiatives. For example, teachers typically teach the social and emotional education that forms a key component of many mental health promotion initiatives. A reasonable expectation is that teachers would deliver such curricula for promoting students' mental health with the high

levels of quality expected for their delivery of other school subjects, such as literacy or numeracy. However, the relatively new curriculum area of mental health is unlikely to have been addressed in pre-service or in-service teacher education, and could be expected to make new demands upon teachers' subject-matter and pedagogical content knowledge. With limited knowledge, few prior experiences of success in teaching in the field, and little opportunity for supportive feedback from colleagues, teachers' self-efficacy and agency might be compromised (Bandura, 1997, 2001).

Furthermore, as Rowling (2007) has pointed out, teachers might feel uncertain about their professional roles in this field, and may believe that mental health lies within the domain of other professionals, such as psychologists and school counsellors. Rowling wrote about the tensions that teachers might experience as they come to terms with new and changing professional roles associated with promoting mental health, arguing that teachers might lack confidence and knowledge to work in different ways. For example, in Reinke et al.'s study (2011), 89% of the teachers agreed that schools should be involved in addressing children's mental health needs, however, only 34% of teachers reported that they felt they had the skills necessary to support these needs in children. Similarly, in an interview study with Maltese primary school teachers and heads of schools, participants agreed about the importance of delivering social and emotional education in schools, but argued that they did not have adequate knowledge and skills to practice social and emotional education in their schools and classrooms (Pace, 2011). And in a qualitative study of Greek teachers' understandings about their roles when teaching social and emotional skills, Triliva and Poulou (2006) found that their participants spoke about their motivation and desire to give the most of themselves to students, and their love of children, but less about the subject-matter knowledge and pedagogy needed to deliver social and emotional education.

Triliva and Poulou's study is part of an emerging literature that broadly addresses teachers' attitudes towards the importance of positive mental health (e.g., Hughes, 2009; Kidger, Gunnell, Biddle, Campbell, & Donovan, 2010; Rothi, Leavey, & Best, 2008). However, analyses by authors such as Weare and Nind (2011), Melhuish et al. (2007) and Humphrey and colleagues (Humphrey et al., 2010; Wigelsworth, Humphrey, & Lendrum, 2012) indicate that greater attention needs to be given to the state of knowledge and confidence held by teachers who mediate the delivery of initiatives to students. As noted by Lendrum et al. (2013), the 'will and skill' of school staff is fundamental to school-based mental health promotion, however there are concerns about teachers' understanding, competence and confidence in this area.

Furthermore, teachers are far from being a homogenous group. Previous studies indicate that demographic characteristics of teachers, such as gender, years of teaching experience and culture can be expected to affect teachers' beliefs, attitudes and capabilities (Rubie-Davies, Flint, & McDonald, 2012). For example, Klassen and Chiu (2010) found that Canadian female teachers reported lower self-efficacy for classroom management than males. In contrast, Rubie-Davies et al. reported a study that included administration of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) to New Zealand teachers. In that study, being female predicted stronger efficacy for enabling student engagement, classroom management, and instructional strategies. Recently, in a study of 266 Portuguese teachers, Moreira, Pinheiro, Gomes, Cotter and Ferreira (2013) found that male teachers reported significantly greater difficulties than female teachers in promoting students' social-emotional skills. Meanwhile, in the relatively new research field about the impact of

cyberbullying on students' wellbeing, Eden, Heiman and Olenik-Shemesh, (2013) reported a study that administered a questionnaire about cyberbullying to 328 Israeli teachers from diverse school settings. Eden et al. found that female teachers were more concerned about cyberbullying, expressed a higher belief in the school's commitment to deal with cyberbullying and had more belief in the importance of learning about cyberbullying. No significant gender differences were found regarding teachers' confidence in identifying and coping with cyberbullying problems. The authors also found significant differences between teachers of different age groups. Elementary school teachers were more concerned than high school teachers about cyberbullying, had more confidence in managing it and more belief in the importance of learning about it middle school teachers' attitudes fell between the two groups.

We have noted above that mental health promotion is a new curriculum area, in which both novice and experienced teachers could be expected to have limited prior experience. Kwok (2014) studied the introduction of a new curriculum in liberal studies in Hong Kong, finding that previous teaching experience had a significant effect, overall, on teachers' concerns about the introduction of the new curriculum. However, teachers with more previous experience indicated higher concerns on some factors, such as Information, but lower concerns on other factors, such as Refocusing (on the needs of students), compared to less experienced teachers. Furthermore, there were some factors that were not influenced by prior experience, such as Collaboration. Klassen and Chui (2010) found that years of teaching experience showed non-linear relationships with three self-efficacy factors, namely instructional strategies, classroom management and student engagement. In that study, teachers' self-efficacy increased from early career to mid-career, and fell thereafter. Meanwhile, in Rubie-Davies et al's (2012) New Zealand study mentioned above, years of teaching experience did not, overall, show significant effects on teachers' self-efficacy, although there was a trend for more teaching experience to predict efficacy for classroom management. In the field for mental health promotion, few teachers are likely to have had many opportunities for multiple successful experiences with developing content knowledge and pedagogical content knowledge as described by Shulman (1986b, 1987) and others (e.g., Grossman, 1995).

Years of teaching experience and gender are just two examples of where teachers are influenced by "their personal histories and cultural understandings to create classroom practices which are molded by microcosms of personal 'funds of knowledge' and beliefs about teaching and learning" (Kern, Roehrig, & Wattam, 2012, p. 469). Particularly, teachers' beliefs and practices are shaped not just by knowledge about their subject matter, students, and classroom contexts, but also by their own life experiences (Clandinin & Connelly, 1992). These life experiences are necessarily situated within their own cultural contexts. Kerna et al. proposed that teachers' cultural perspectives of teaching may be productive, but also inhibitory, with respect to generating practices that best meet students' needs. It seems reasonable to hypothesise that when faced with the need to teach in new curriculum areas such as mental health promotion, teachers may draw heavily upon whatever knowledge they do have available to them, including their cultural experiences and perspectives of mental health and mental illness. In many societies mental health and mental ill-health have been clouded in a lack of availability of good quality information and evidence, misunderstandings, secrecy and stigma (Bowers, Manion, Papadopoulos, & Gauvreau, 2013), which may impact upon teachers' beliefs and attitudes.

In summary, the literature reviewed above presents the case for nations to attend to the mental health of its citizens, and for the role of schools in mental health promotion. The operationalization of these goals at the practice level is largely the responsibility of the teachers who are in face-to-face contact with students. The capabilities of teachers to undertake this demanding role needs close consideration. Thus the remainder of this paper reports our analysis of data collected from primary and secondary school teachers in Australia and Malta about their attitudes, knowledge, self-efficacy, and resources for promoting the mental health of the children and youth in their care.

## **6. Context of the study**

The opportunity arose through a European Union international research staff exchange scheme (FP7 Marie Curie IRSES EC, 2011) to compare data from two countries, Australia and Malta, that are each at relatively early stages of introducing mental health into the formal school curricula. The two school systems are located within vastly different countries with respect to geography, population numbers, and cultural histories, although Australia and Malta do share a relatively recent history of migration, with a substantial number of current family ties due to that migration. On the one hand, it could be considered that the two countries constitute a sample of convenience. On the other hand, the collaboration between the two countries demonstrates the possibilities for sharing data and knowledge through the researcher mobility provided by programs such as the European Union FP-7.

In Australia, questionnaires had been delivered to teachers as part of an evaluation commissioned by *beyondblue: the national depression initiative*, of the KidsMatter primary school mental health promotion initiative, which was piloted in 100 Australian primary schools. We sought permission from beyondblue to re-use their previously validated evaluation questionnaire in Malta, and also, to access their evaluation data-base for the opportunity of comparing the Australian and Maltese teachers' responses. Beyondblue kindly granted permission to both requests. Such secondary analysis of suitable data enables substantial time and cost efficiencies in data collection.

Table 1 presents some comparative demographic characteristics of the two countries, indicating a large divergence in population size, and associated school and teacher numbers.

Place Table 1 about here

## **7. Research Questions**

The broad aims of our research were to investigate teachers' perspectives about promoting students' mental health: The research questions were:

- What are teachers' perspectives about their and their schools' capabilities for promoting students' mental health?
- What are the influences of gender, years of teaching experience, year levels taught and country, on teachers' perspectives about their and their schools' capabilities for promoting students' mental health?

## **8. Method**

### **8.1. Ethics**

Ethics approvals were obtained from the ethics committees of [BLIND] universities, the relevant Departments of Education, and School Principals/Heads of Schools in Australia and Malta. Participation was informed, voluntary and anonymous.

## **8.2. Questionnaires.**

The questionnaires contained 79 items relating to teachers' perspectives about their knowledge, confidence and teaching resources in the five areas for student social and emotional development proposed by CASEL (2011), and about their schools' approaches and resources for whole school approaches to promoting mental health. Table 2 provides an overview of the thematic components of the questionnaire, the number of questions per theme, and a sample question to illustrate each theme. For example, following Bandura (2006), three questions began with the stem "I can..." to measure self-efficacy. To measure knowledge, five questions began with the stem 'I know how....' Other questions asked about actions, such as "The school teaches..." and "Teachers attend...."

Place Table 2 about here

The original questionnaire used in Australia was in English. Although Malta is a dual language country (Maltese/English), after consultation with the local teaching community we decided to translate the questionnaire in order to ensure best possible access to the concepts in the questionnaire by the teachers. The second author undertook the translation. Two Maltese/English speaking teachers independently verified the Maltese translation against the English version. Minor changes were made following verification, until all three translators agreed upon the final translation.

Responses to each question were on a 7-point Likert scale, with scale anchors of *very strongly disagree* (1) to *very strongly agree* (7). Questionnaires were delivered to teachers via their school administrator, completed by the teachers at a time and place of their own choosing, and returned in anonymous, sealed envelopes.

## **8.3. Sampling design.**

Australia: As noted above, this study re-uses a data set originally collected by beyondblue (for an evaluation of the KidsMatter primary mental health promotion initiative). Schools volunteered to be involved in KidsMatter. Schools included metropolitan, rural and remote sites across state, Catholic and independent sectors. As part of volunteering to be part of KidsMatter, the schools' teachers agreed to complete the evaluation questionnaires. The teacher respondents were employed in primary schools (typically Reception to Year level 6 or 7) and primary/secondary schools (typically Reception to Year level 10 or 12), although there were some minor variations in these year levels.

Malta: The study in Malta was carried out in one of the ten regional school colleges in the country. Selection of the sample relied upon an initial approach to a College Principal, who agreed to our conducting the study in the seven schools in his college. The four primary schools (Reception to Year level 6) and three secondary schools (Year levels 7 to 12) comprising the college were invited, and agreed, to participate. From those schools, all 321 teaching staff (teachers and learning support assistants) were invited to complete questionnaires. A 100% response rate was not anticipated from this invitational sample.

## **8.4. Participants.**

Australia: Due to their schools' volunteering for KidsMatter, the response rate to the evaluation was 100%, giving 812 respondents. Missing data was less than 1% per question. Respondents included school leaders with teaching experience, classroom teachers and learning support teachers. Australian teachers are required to have a minimum of a four-year degree, including education qualifications. Respondents had, on average, 14.65 years of teaching experience (with a range of less than 1 to 47 years). Females comprised 87.3% of respondents. The median age of the students taught by respondents was 10.3 years.

Australia is a multi-cultural society with representation largely from Europe, with more recent migration from Asia and Africa. Information about teachers' country of birth was not collected in our study, however, a national survey of over 10,000 randomly selected Australian teachers by the Australian Council of Education Research (McKenzie, 2008) reported that 86% of primary teachers and 81% of secondary teachers were born in Australia. Indigenous teachers comprised less than 2% of that sample. There is no reason to expect that the sample of teachers in the KidsMatter study would not reflect these Australia-wide characteristics, as care was taken in the original stratified sampling design to ensure representation from a wide range of school types and locations.

Malta: Of the 321 questionnaires delivered to the seven schools that agreed to take-part in this study, 217 were returned, giving a response rate of 68%. Missing data ranged from less than 1% to 2.3% (5 participants) per question. Respondents included school leaders with teaching experience, classroom teachers, learning support teachers and kindergarten assistants. Maltese teachers are required to have a minimum of a four-year university degree in education. Maltese was nominated as the mother tongue of 211 respondents and English was nominated by 5 respondents (7 cases missing), indicating that the majority of respondents were of Maltese heritage. Respondents had, on average, 14.2 years of teaching experience (with a range of 1 year to 40 years). Females comprised 77% of the sample. The median age of the students taught by this sample of teachers was 11.3 years.

## **9. Data Analysis**

### **9.1. Principal components analysis.**

The questionnaire items in each of the 11 thematic groups (see Table 1) were subjected to principal components analyses (PCA) and reliability analyses using SPSS (see Appendix A for details). The identified factors replicated the 11 factors used in the original Australian study and confirmed the 11 thematic groups of items in the Maltese sample. For the subsequent analyses reported below, in order to maintain the interpretability of participants' scores on each factor in relation to the original 7-point Likert scales (*very strongly disagree* to *very strongly agree*), participants' responses to each item were weighted by the factor score coefficients, averaged within each factor, and standardised.

### **9.2. Hierarchical Linear Modelling**

We undertook two-level hierarchical linear modelling (HLM: Version 7) in order to determine whether selected demographic variables predicted differences in outcomes. Our decision to use HLM was based upon the fact that the teachers were grouped

together in schools. It can be predicted that teachers grouped within the same school would be more likely to have characteristics in common than teachers located in different schools (Bryk & Raudenbush, 1992). Unlike ANOVA, HLM takes account of such nesting of teachers within schools, and overcomes problems with assumptions of independence of observations within higher-level clusters (Garson, 2013; Snijders & Bosker, 2012).

Missing data ranged from 0.5 to 5%. HLM accepts missing data at level 1, so a conservative approach of non-replacement of missing data was adopted, leading to slightly different sample sizes for each analysis.

To begin, the 11 factors listed in Table 1 were each tested as outcomes in successive 2-level<sup>1</sup> HLM analyses using full maximum likelihood estimation, with no predictors. (That is, we ran 11 separate HLM analyses.) Significant between school differences indicated the need to use multi-level modelling with this data (Garson, 2013)<sup>2</sup>. The unconditional (null) models provided the points of comparison for testing subsequent models containing predictors.

Next, we added predictors to each of the 11 models. Level 2 of the HLM analyses tested for differences between schools. Country was entered as a dummy variable into the models at level 2. Additionally, school type<sup>3</sup>, geographical location<sup>4</sup>, sector<sup>5</sup>, and co-ed<sup>6</sup> were tested as potential predictors. The latter three variables exerted limited influence on the 11 outcome factors, and were dropped from all models.

Meanwhile, level 1 of the HLM analyses tested for individual differences between teachers. Two demographic characteristics of teachers, namely gender and years of teaching experience were tested as potential predictors at level 1. Gender showed some predictive influences on some of the outcome factors and was retained in the models. Years of teaching experience exerted little influence on any of the 11 outcome factors, however was retained in the analyses for theoretical interest.

The final 11 HLM analyses, depicted conceptually in Figure 1 and algebraically in Equation 1, estimated the effects of country and school type at level 2, and the effects of gender and years of teaching experience at level 1, on each of the 11 outcome

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<sup>1</sup> With only two countries, it was not possible to undertake 3-level HLM, as there would have been too few groups at level three of the model. We therefore used two-level HLM, and added country as a dummy variable at level 2 (personal communication J. Peugh, 25/02/2013).

<sup>2</sup> For consistency, Self-efficacy was also subjected to HLM, although the results would be similar to ANOVA given the distribution of variance between the two levels.

<sup>3</sup> School type: primary; primary & secondary; secondary

<sup>4</sup> Geographical location: metropolitan; rural; remote

<sup>5</sup> Sector: state; Catholic; independent

<sup>6</sup> Co-ed: Co-educational; boys only; girls only.

factors<sup>7</sup>.

Place Figure 1 about here

Equation 1: HLM Model

$$\text{OUTCOME}_{ij} = \gamma_{00} + \gamma_{01} * \text{COUNTRY}_j + \gamma_{02} * \text{SCHL\_TYPE}_j + \gamma_{10} * \text{GEND}_i + \gamma_{20} * \text{YRS\_EXP}_{ij} + u_{0j} + r_{ij}$$

## 10. Results

We begin with descriptive statistics. Table 3 shows the percentage of teachers who *strongly agreed* (selected scores 6 or 7) to each of the 11 outcome factors, ranging from 21% to 79%. Three factors were rated at *strongly agree* by 50% or more teachers, namely Positive Community, Staff Attitudes and Staff Actions. A relatively low 21% of teachers strongly agreed that their school engaged with the regular teaching of social and emotional skills to all students. Parenting Support, with 27% of respondents selecting *strongly agree*, was also relatively low. All three of the individual teacher factors, namely Knowledge, Resources and Self-Efficacy were rated at *strongly agree* by less than 50% of teachers. Very few respondents selected *strongly disagree* for any of the 11 factors, although the 9% of teachers who selected *strongly disagree* for the factor Implementation of Social and Emotional Learning Programs (SEL) is relatively high compared to the overall *strongly disagree* responses.

Place Table 3 about here.

The next step was to determine if there were any differences in responses from teachers with different backgrounds, for which we report the HLM. The first round of HLM outputs of the null (unconditional) models of the 11 outcome factors illustrated that there was substantial percentages of variance at level 1, and at level 2. Table 4 shows that for all 11 outcome factors, the greatest percentage of variance was at level 1, between teachers, ranging from 67.9% for Implementation of SEL for students, to 96.6% for Teacher Self-efficacy. All but one of the between school effects were significant at  $p < 0.001$ , ranging from 7% of the total variance accounted for (Teacher Knowledge), to 32.1% (Implementation of SEL). (In other words, intraclass correlation coefficients ranging from .07 to .321 respectively.)

Place Table 4 about here

The second round of outputs of the HLM shows the influences of adding predictors to the HLM models. These results are summarised in Table 5.

Place Table 5 about here

Column 2 of Table 5 shows the coefficients of the intercepts for each outcome factor. These can be interpreted as the estimated mean score for the reference group (namely, Australian, female, in combined primary & secondary schools, with 0 years of teaching experience) for each factor, controlling for the other variables in the model. It can be seen from column 1 that the estimated mean scores for all 11 outcome factors were above the mid-point of the 7-point Likert scales, ranging from 4.642 for

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<sup>7</sup> Model specifications are included at Appendix B



Implementation of SEL, to 6.3 for Staff Attitudes. These mean response levels are encouraging, indicating that, on average, teachers reported more positively than negatively about the 11 factors supporting mental health promotion in their schools.

At the school level, from Table 5, column 4: country, it can be seen that three coefficients are significantly negative ( $p < .01$ ). The scoring system for country was 0 for Australia, and 1 for Malta. As this is a binary coded variable, the differences between the mean scores represent the differences between the two countries. Thus the mean scores for Parenting Support, Teacher Knowledge, and Teaching Resources are significantly lower for Malta, with medium to large effect sizes, controlling for other variables in the models.

Also at the school level, from Table 5, column 7: school type, it can be seen that significant influences at  $p < .01$  were found for two outcome factors, with the negative coefficients showing a declining slope for Staff Attitudes and Actions from primary (coded 1), through primary/secondary (coded 2), through to secondary schools (coded 3), with medium effect sizes. This indicates that teachers of older children and youth have less positive Attitudes and Actions towards school-based mental health promotion, controlling for other variables in the models.

At the teacher level, from Table 5, column 10: gender, it can be seen that being male or female significantly predicted the outcome factors Staff Attitudes, Staff Actions, and Implementation of SEL at  $p < .01$ , with small effect sizes. The first two factors showed significantly higher mean scores for females, and the latter showed a significantly higher score for males (coding females: 0; males: 1), controlling for other variables in the models.

Interestingly, the teacher level variable years of teaching experience (column 13) was not a significant predictor at  $p < .01$  for any outcome factors. Non-linear effects for years of teaching experience were also tested but did not reach the interpretation threshold of significance ( $p < .01$ ).

## **11. Discussion**

Our first research question asked,

- What are teachers' perspectives about their and their schools' capabilities for promoting students' mental health?

The results of our study illustrate that our teacher participants have generally positive attitudes towards mental health promotion. At the attitudinal level, it seems reasonable to suggest that respondents from both Australia and Malta support mental health promotion in schools. This is in keeping with findings from other countries (e.g., Rothi et al., 2008; Triliva & Poulou, 2006).

However, the responses from teachers illustrate some potential difficulties when translating positive attitudes into actual practices. Our descriptive analysis indicated that about one quarter to one half of teachers did not strongly agree to factors that measured whether they are knowledgeable, well-resourced, self-efficacious, that their school was engaged with promoting students' mental health, and so on.

One way of thinking about this is to imagine substituting a traditional subject-matter, in the place of mental health promotion, into this analysis. Would the educational

community be satisfied if maths, or literacy, or science teachers alerted us to the fact that they did not strongly agree that they were knowledgeable, well-resourced, efficacious, that their school supported professional development, and so on in their subject-matters? If current policy directives are to situate initiatives to promote students' positive mental health (such as social and emotional education) in school classrooms, is it acceptable that teachers' and schools' capabilities for enacting that new curriculum are considered, by the teachers themselves, to be less than optimal? Current literature on the science of sustainability point out that new initiatives that are poorly valued and poorly implemented at the school level are likely to fail, either in the short term, or as time passes and start-up resources such as project officers and additional funding are withdrawn (e.g., Greenberg, 2010; Scheirer, 2005; Shediac-Rizkallah & Bone, 1998).

Our second research question asked,

- What are the influences of demographic predictors such as gender, years of teaching experience, year levels taught and country, on teachers' perspectives about their and their schools' capabilities for promoting students' mental health?

The HLM showed that level 2, school, accounted for substantial variation across all but one (Self-efficacy) of the outcome factors. This level 2 variation indicates that teachers belonging to the same school tended to be more alike in their responses compared to teachers in other schools, pointing to influences located in each school's context.

Teachers' perceptions from the two countries, Malta and Australia, do not appear to differ significantly on most factors. Although research studies typically search for significant differences, the similarities between teachers' reports in the two countries in this study are of theoretical, and potentially practical interest from the perspective of sharing ideas and resources. However, it is of interest that the Maltese teachers gave significantly lower scores to issues that directly influence their pedagogy, namely, the factors Knowledge and Resources. Teachers of the two countries also significantly differed on their perceptions of Parenting Support, with lower responses from the Maltese teachers.

Meanwhile, most variance existed at level 1, the teacher level, indicating a wide variety of teachers' perceptions. Overall, gender showed little influence. Although there were two factors (Attitudes and Actions) endorsed more strongly by females, and one (Implementation of SEL) more strongly endorsed by males, the effect sizes were small.

It is notable that the predictor years of teaching experience, which in this study ranged from 0 to 47 years, did not have significant effects on the outcome factors Teachers' Knowledge, Teaching Resources or Self-efficacy, as might be expected in more traditional subject-matter areas. This highlights that mental health promotion is a subject-matter that has not benefited from teachers' opportunities to learn, to try-out new pedagogies, to develop materials, and to consolidate their knowledge, during the course of their teaching careers. This draws attention to the issue that school-based mental health promotion is not just a new approach to teaching a traditional subject, such as, for example, using problem-based learning in science. Rather, in Shulman's (1986a, 1986b, 1987) terms, promoting students' mental health requires new subject-

matter knowledge, new pedagogical content knowledge, and new ways of knowing about learners and their characteristics.

The HLM also showed influences of school type, namely that primary school teachers showed significantly more positive attitudes and actions towards mental health promotion when compared with their secondary school counterparts. A study by Lendrum et al. (2013) found particular difficulties with mental health promotion in secondary schools, indicating that secondary school teachers' beliefs about their roles may not be as advanced as primary teachers with respect to teachers' responsibilities for promoting students' mental health. When these findings are associated with the knowledge that vulnerability for the onset of mental health difficulties rises in the teenage years (McGorry, Parker, & Purcell, 2006), it underlines the need for professional learning opportunities that particularly recognise the attitudes and needs of teachers in secondary school contexts.

## **12. Conclusions and Implications**

Our descriptive analysis supports previous research, finding that, overall, teachers have positive attitudes towards mental health promotion. However substantial proportions of teachers expressed reservations about their abilities to enact a range of components of mental health promotion, indicating that they need support to develop their capabilities in this field. Our HLM findings suggest that Maltese and Australian teachers' perceptions did not significantly differ on most of the measured outcome factors. However scores were significantly lower for Maltese teachers on three factors, namely, Knowledge, Resources and Parenting Support, suggesting that these three areas may need particular attention in that country. Providing adequate opportunities for teacher professional learning and building schools' capacities are key to the immediate success and long-term sustainability of mental health promotion in schools. Moreover, a sense of increased knowledge would be predicted to increase teachers' self-efficacy for mental health promotion, thus leading to a virtuous cycle (Bandura, 2001).

The mental health of children and youth in Australia and Malta is both a chronic problem evidenced in long-term populations in both countries, and an acute problem evidenced in some recent arrivals to the shores of both countries. The information provided by our teacher respondents highlights that teachers and schools need support to build upon their existing capacities for successfully engaging with school change in order to promote students' mental health.

## **13. Limitations**

The design of this study includes limitations to bear in mind when interpreting the results. The first is that the data were collected at two different time points, 2007 and 2011, with approval granted to re-use the 2007 Australian data set to enable comparisons with matching data collected in Malta in 2011. Our experience working with schools, and the time span represented by the literature reviewed at the beginning of this paper, suggests that the field of mental health promotion in educational settings is not changing at a rapid pace. An assumption of this study is therefore that time difference in data collection is unlikely to have a noticeable impact upon our interpretations of our results reported in this paper. Secondly, the participants used in this study were volunteers in the Australian study, and a sample of convenience in the Malta study. Caution must be exercised if transferring our findings to other contexts.

The school-level demographic variables of geographical location, sector, and co-ed did not show significant effects. There remains a substantial proportion of unexplained variance at both the teacher and school levels. A future direction would be to investigate additional characteristics of teachers and schools that might account for the differences observed in this study.

The value of our findings lies in the potential to guide frameworks for future analyses, and in informing issues to be addressed to advance the progress of mental health promotion in schools.

#### **14. Appendix A: Principal Components analysis**

The correlation matrices of the items within each factor showed that most coefficients were above .3 and below .8, indicating that the items were suitable for PCA. The Kaiser-Meyer-Olkin values ranged from .64 to .94, exceeding the recommended value of .6. The Bartlett tests of sphericity reached statistical significance ( $p < .0001$ ) in all cases. Averaged communalities for each factor ranged from .53 to .87, with 10 factors exceeding 0.6. initial eigenvalues indicated one factor for each of the 9 of the 11 thematic groups of items, with two extracted factors for each of the remaining two groups. Following inspection of the scree plots and items in these latter two groups, and keeping in mind the need for relative simplicity for the next step in the analysis (namely, hierarchical linear modelling), we specified the items in these latter two groups into one factor each. Thus, the factors used in this study replicated the factors used in the original beyondblue evaluation study. Eigenvalues for the 11 factors ranged from 1.94 to 7.31, with from 52.5 to 86.9% of the variance explained for each factor. Item loadings within each factor ranged from .64 to .94. Reliabilities (Cronbach's alpha) ranged from .72 to .96. The original thematic names listed in Table 1 were retained for each factor.

Insert Table Appendix A about here

## Appendix B

The HLM analyses, depicted conceptually in Figure 1 and algebraically in Equation 1, estimated the effects of gender (entered uncentered) and years of teaching experience (entered uncentered) at level 1, and the effects of country, (entered uncentered), and school type (entered centered), at level 2, on each of the 11 outcome factors.

The HLM models for each of the 11 outcome factors showed significant reductions in deviance ( $p < .001$ ) from their corresponding null models, indicating better model fit. Inspection of the output for the standard errors and the robust standard errors showed substantial similarity, indicating that assumptions of normality were satisfied. All reliability estimates exceeded the minimum threshold of 0.05 (Darmawan & Keeves, 2009). Tests for homogeneity of variance of residuals at level 1 were not significant ( $p > .05$ ) in 10 of 11 models. However, the analysis for the factor Teaching Resources showed a significant violation of homogeneity of variance of residuals. Modelling heterogeneous residual variance by country at level 1 of the model for teaching resources corrected this and achieved a better model fit (Garson, 2013).

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Table 1: Demographic characteristics of samples in Australia and Malta

	<b>Malta</b>	<b>Australia</b>
Year of Data collection	2011	2007
Total Population	Approx 418,000 (2010) **	Approx 21,000,000 (2007)*
School Population	Approx. 177 schools**	Approx 9529 schools*
Teacher Population	Approx. 6,718 **	Approx 276,822 *
Sample	All teachers in 7 public schools  (~ 4% of Maltese schools)	Selected teachers in 100 schools across Australia  (< 1% of Aust. Schools)
School Type Sampled	State	State/Catholic/Independent
Location	Town/Village	Metropolitan/Rural/Remote
Religion	94% Christian  6 % Others**	Christian: 64%  Buddhism: 2.1%  Islam: 1.7%  Hinduism: 0.7%*

\*\* National Statistics Office: Malta

\* Australian Bureau of Statistics

Table 2: Factors and examples of items in the questionnaire for teachers

	<b>Factors</b>		<b>No. of Items</b>	<b>Sample Item</b>
1	Positive School Community	School	11	This school encourages caring relationships between staff and families
2	Staff Attitudes		3	Students can be taught social and emotional skills
3	Staff Actions		7	Staff at this school help students develop an awareness of their own feelings
4	Parenting Support		13	This school provides parents/carers with opportunities to meet other families/carers to develop support networks
5	Early Intervention		12	This school acts quickly if a child has emotional, social or behavioural difficulties
6	School Engagement		10	The school leadership team actively supports the implementation of programs to develop students' social and emotional skills
7	Implementation of SEL		7	The school teaches social and emotional skills regularly to all students (at least once per week)
8	Professional Learning		3	Teachers attend professional development about supporting students with emotional, social or behavioural difficulties
9	Teacher Knowledge		5	I know how to help students to develop an awareness of the thoughts and feelings of other people
10	Teaching Resources		5	My teaching resources help students to develop skills to make responsible decisions
11	Teacher efficacy	Self-	3	I can provide effective support for parent/carers about students' emotional, social or behavioural difficulties

Table 3: Percentage of Teachers selecting Scores in three bands: Strongly Disagree to Strongly Agree, on each Outcome Factor

	<b>% Strongly Disagree</b>	<b>% Medium</b>	<b>% Strongly Agree</b>
	<b>Scores 1 &amp; 2</b>	<b>Scores 3 to 5</b>	<b>Scores 6 &amp; 7</b>
Positive Community	1	48	51
Staff Attitudes	0	21	79
Staff Actions	1	39	60
Parenting support	2	72	27
Early Intervention	3	66	31
School engagement	2	57	42
Implementation of SEL	9	71	21
Professional Learning	5	54	41
Teacher Knowledge	1	53	47
Teaching Resources	3	55	43
Teacher Self-Efficacy	1	53	47

Table 4: Percentage variance accounted for by the null models at Level 1 (Teachers) and Level 2 (Schools)

		Teacher level %	School level % (ICC)	<i>p</i>
<b>Factors</b>				
Positive Community	School	84.1	15.9	***
Staff Attitudes		91.5	8.5	***
Staff Actions		90.1	9.9	***
Parenting support		83.6	16.4	***
Early Intervention		88.1	11.9	***
School engagement		85.8	14.2	***
Implementation of SEL		67.9	32.1	***
Professional Learning		80.6	19.4	***
Teacher Knowledge		93.0	7.0	***
Teaching Resources		#	#	***
Teacher Self-Efficacy		96.6	3.4	-

# Heterogeneous variance modelled by Country

\*\*\* $p < .001$



Table 5: Coefficients of the HLM models

Coefficients of Intercepts and Independent Variables																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Outcome Factors (Dependent Variables)	Intercept	<i>p</i>	<i>r</i>	Country	<i>p</i>	<i>r</i>	School Type	<i>p</i>	<i>r</i>	Gender	<i>p</i>	<i>r</i>	Teaching Experience	<i>p</i>	<i>r</i>	
				(Australia-Malta)			(Prim-Sec)						(Years)			
Positive School Community	5.732	***	0.994	-0.215	*	0.164	-0.095			-0.015			-0.006			
Staff Attitudes	6.300	***	0.998	-0.039			-0.222	***	0.295	-0.222	***	0.094	-0.001			
Staff Actions	5.866	***	0.995	-0.012			-0.200	**	0.255	-0.241	***	0.107	-0.004			
Parenting support	5.175	***	0.989	-0.247	**	0.193	-0.196	*	0.183	0.032			-0.004			
Early Intervention	5.022	***	0.987	-0.021			-0.076			0.111			-0.005			
School engagement	5.446	***	0.992	-0.113			-0.099			0.061			-0.005			
Implementation of SEL	4.642	***	0.971	-0.139			-0.074			0.270	***	0.120	-0.009	*	0.048	
Professional Learning	5.223	***	0.979	-0.153			-0.218			0.118			0.002			
Teacher Knowledge	5.563	***	0.995	-0.385	***	0.373	-0.082			-0.211	*	0.054	0.002			
Teaching Resources	5.565	***	0.994	-0.561	***	0.533	-0.132	*	0.225	-0.167			-0.001			
Teacher Self-Efficacy	5.339	***	0.993	0.041			-0.127			-0.221	*	0.053	0.002			

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Effect sizes (partial)  $r$  (calculated from  $t$ ): approximate guidelines: small =  $r > 0.1$ ; medium =  $r > 0.24$ ; large =  $r > 0.37$  (Kirk, 1996; Thompson, 2006)

Note:  $p < .05$  not interpreted in order to reduce the risk of Type 1 errors due to multiple tests

Table 6 (Appendix A): Principal Components Analyses of questionnaire items

<b>Factor</b>	<b>No. of items</b>	<b>Kaiser-Meyer-Olkin</b>	<b>Bartlett's Test (<i>p</i>)</b>	<b>Cronbach's alpha</b>	<b>Eigenvalues</b>	<b>% of Variance</b>
Positive School Community	11	0.913	0.000	0.918	6.198	56.348
Teacher Attitudes	3	0.642	0.000	0.724	1.947	64.896
Staff Actions	7	0.908	0.000	0.954	5.329	76.125
Parenting support	13	0.923	0.000	0.933	7.316	56.276
Early Intervention	12	0.942	0.000	0.939	6.983	63.486
School engagement	9	0.897	0.000	0.882	4.726	52.509
Implementation of SEL	8	0.923	0.000	0.922	5.215	65.186
Professional Learning	3	0.75	0.000	0.859	2.83	70.751
Teacher Knowledge	5	0.888	0.000	0.947	4.222	84.441
Teaching Resources	5	0.899	0.000	0.962	4.34	86.889
Teacher self-efficacy	3	0.689	0.000	0.79	2.114	70.480