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Welcome to the first issue for 2020.

We receive articles from many parts of the world and some do not make it into the journal. This is mainly due to our focus on young people and, although we do not specify an age range, most published articles are about those between the ages of 5-20 years old. There are exceptions and the Editor welcomes your contribution.

This issue continues with the proud tradition of independent publishing and offers an eclectic mix.

The journal, published since 1983, is aimed at those involved with education and health who are concerned with the health and wellbeing of young people. Readers, in the UK, come from a broad background and include: primary, secondary and further education teachers, university staff, and health-care professionals working in education and health settings. Readers outside of the UK share similar backgrounds. The journal is also read by those who commission and carry out health education programmes in school and college.

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Implementing the Green Paper: The Challenges of multi-disciplinary team collaboration. A review of the evidence

The mental health of children and young people (CYP) is of growing national concern, with an estimated 1 in 8 having a diagnosable disorder (NHS Digital, 2018). Conjointly, waiting times for Child and Adolescent Mental Health Services (CAMHS) have more than doubled since 2011/12 (Frith, 2016), compounded by the reduction in the amount of services (Young Minds, 2015). This means that schools are often the first place CYP and their families look to seek support for mental health (Cortina, Saunders, Smith, & Wolpert, 2016), something the Department of Health (DoH) and Department for Education (DfE) have stated they intend to utilise in *'Transforming Children and Young People's Mental Health Provision: a Green Paper'* (subsequently referred to as the Green Paper) (2017).

However, teachers often feel they lack the knowledge and expertise to handle such issues (Lendrum, Humphrey, & Wigelsworth, 2013) and have expressed a desire for better communication with mental health services (Shelemy, Harvey, & Waite, 2019).

This paper will examine the background to CAMHS before assessing the current obstacles to working more collaboratively with schools, moving onto a recommendation as to how barriers can be overcome in order to ensure better access to support for secondary school pupils.

Background

Nationally, there is concern about the lack of accessible services for children and young people's mental health (CYPMH) with services available dependent on area (CQC, 2017a). Mental health provision for CYP is a complex multi-agency service, split into 4 tiers:

- Tier 1: Universal services e.g. schools and GPs
- Tier 2: Targeted services e.g. schools and youth counselling
- Tier 3: Community CAMHS
- Tier 4: Specialist inpatient and outpatient CAMHS

(Parkin, Long, Gheera & Bate, 2019).

Funding is split between local Clinical Commissioning Groups (CCG), voluntary sector and NHS England dependent on tier (Parkin *et al.*, 2019). As different sectors provide different services, it is important that collaboration amongst all stakeholders takes place to ensure an effective robust service (Joint Commissioning Panel for Mental Health, 2013); however, the current ability of services to respond to the growing demand of emerging mental health disorders is limited. The DoH have revealed that only 25 to 35% of CYP with a diagnosable mental health disorder were being treated (DoH, 2015) often due to high thresholds (Children's Commissioner, 2016).

With the system under increasing strain, focus has shifted onto the use of schools as a strategy for building resilience and early intervention. 'Future in Mind' (DoH, 2015) highlighted the effectiveness of schools in adopting a whole school approach to mental health and wellbeing, encouraging a mental health lead within each school. In 2017 the prime minister announced a review into how educational establishments could be better utilised to support emerging poor mental health (H.M. Government, 2017). The House of Commons (HoC) Education and Health Committees (2017) made a number of recommendations including the development of whole school culture promoting Social and Emotional Welfare (SEW), timetabled teaching of

the same, and staff training. The report also encouraged collaboration between health and education services (HoC Education and Health Committees, 2017).

The publication of the Green Paper later that year incorporated many of the features highlighted in the report, its stated aim, to address whole school culture with processes that would support and promote good mental health through school based Designated Senior Leads for Mental Health (DSLMH), supported by NHS-CAMHS based Mental Health Support Teams (MHST) (DoH/DfE, 2017). However, funding for Green Paper implementation remains unclear; whilst it is stated that funding will be received through CCGs, there are no plans to ringfence it (Partnership for Well-being and Mental Health in School's [PWBMHS], 2018). Moreover, the role of DSLMH is not a statutory requirement (PWBMHS,2018), something confirmed in personal communication with the DfE (2019), who stated, "*Since the senior lead role is not mandatory, there is no requirement to confirm that an individual has reached the required standards to effectively carry out the role,*" revealing a further issue regarding training for the position. Additional difficulties arise when considering that the roll out of the MHST is over a 10-year period as opposed to just 5 for the DSLMH (DoH/DfE 2017).

Current training that does exist is aimed at collaborative working between DSLMH and MHSTs with the Green Paper (DoH/DfE, 2017) recommending the CASCADE Framework (Wolpert & Cortina, 2018) as a tool to improve collaboration between services. It is this framework that will be examined in more detail later.

Assessment

Public Health England (PHE) profiles (2015) estimated the percentage of 5-16 year olds with a diagnosable mental health disorder at 9.2% nationally with the number varying according to region (see Table 1, for a breakdown of regional statistics http://www.thrivingfutures.co.uk/444551355). Whilst the reasons for these differences are not stated amongst the figures, examination of vulnerability factors (Table2 http://www.thrivingfutures.co.uk/444551355) within different areas, offers some potential clues whilst also highlighting the important role school plays in determining not just academic success, but also health outcomes. The impact of socioeconomic factors becomes apparent when comparing the North East, which has the highest estimated level of mental health disorders at 10%, with the South East which has the lowest at 8.5%. Comparison of circumstances (Table 2, http://www.thrivingfutures.co.uk/444551355) reveal stark differences, particularly that of pupils in receipt of free school meals (FSM), an indicator of social deprivation and accepted risk factor for developing poor mental health (DfE, 2018) with 18.9% of North East CYP receiving FSM compared to just 9.4% in the South East.

Equally, the rate of fixed period exclusion is nearly twice as high in the North East compared to the South East. Risk factors are cumulative, hence a young person from a disadvantaged socioeconomic background, eligible for FSM, who also has a special educational need (SEN) and problematic parenting, is also more likely to develop a conduct disorder (Murray, 2010). The Timpson Review into school exclusion echoed this revealing that 78% of permanent exclusions were of students who had either a SEN, needed support, or received FSM, and that 11% met the criteria for all three (Timpson, 2019). The review made a number of suggestions for improving the current rate of exclusions, calling for a need to understand and respond to the mental health issues that lead to problem behaviours (Timpson, 2019). This fits in with the Green Paper's (DoH/DfE, 2017) plan to address mental health in schools.

The Green Paper is now on phase 2 of its roll out with an initial 25 'trailblazing' areas piloting the introduction of 59 MHSTs in 2019. A further 57 trailblazing areas were added to the list in July 2019 in phase 2, expanding the original sites and creating new ones; these are expected to have started work towards introducing 123 MHST by the end of 2020 (NHS England, 2019). (See tables 3, 4 & 5 http://www.thrivingfutures.co.uk/444551355 for a breakdown of sites).

The majority of teaching staff believe that schools should address the mental health needs of CYP (Reinke, Stormont, Herman, Puri, & Goel, 2011) however there is a perceived lack of knowledge and skills to deliver such lessons or interventions (Lendrum, Humphrey & Wigelsworth, 2013). Teachers have also expressed concern that they will be expected to become the therapist (Shelemy, Harvey, & Waite, 2019) highlighting a need for better communication and

increased support from CAMHS (Shelemy, Harvey, & Waite, 2019). Challenges in communication between educational and CYPMH services are not new (Cortina *et al.,* 2016; Weare, 2000), and the '*Future in Mind*' report (DoH, 2015) highlighted the need for improved communication, recommending a designated points of contact in both schools and CAMHS.

This has been addressed in the Green Paper (DoH/DfE, 2017), with the recommendation of DSLMH within schools and MHSTs working collaboratively to help bring about whole school cultural change to support mental health. The Nursing and Midwifery Council (NMC) have also recognised the need for greater collaboration with other organisations such as Ofsted to ensure a robust service as the nature of the NHS adapts and evolves into new ways of working (Sutcliffe, 2019). Concordantly, the Care Quality Commission [CQC] (2018) emphasised the need for effective collaboration by reporting on a disjointed system that fails to work well together resulting in poor results for vulnerable CYP.

However, the challenge is not easy as logistical barriers must also be overcome as school and local authority boundaries do not necessarily match NHS and Clinical Commissioning Group (CCG) boundaries (CQC, 2017b). Whilst complex, evidence shows that integrated working can be effective (PHE, 2018) and explains why collaboration has also been the government's priority with regards to implementing the Green Paper. The afore mentioned CASCADE framework aims to improve joint working amongst all stakeholders in CYPMH including schools, CAMHS, CCGs and local authorities (DoH/DfE).

Recommendation

The CASCADE framework is a self-assessment tool to assist in multi-disciplinary team integrative working, developed by the Anna Freud National Centre for Children and Families (AFNCCF) (Wolpert & Cortina, 2018). Based around seven domains including clarity, structures, adaptability and evidence-based practice, CASCADE helps stakeholders within both mental health and education, to work to an agreed framework thus assisting in developing the collaborative approaches needed to enable effective mental health support within schools (Wolpert & Cortina, 2018).

Piloted between September 2015 and 2016, the '*Mental Health Services and Schools Link Pilot*' used the CASCADE scaffold, developed specifically for the trial, to help plan, implement and reflect on collaborative working between CCGs, schools, CAMHS, and local authorities (Day, Blades, Spence, & Ronicle, 2017). The pilot was based around three phases that ran concurrently during the academic year; one - planning, and two – embedding and sustaining practice, were facilitated by joint workshops; phase three focused on supporting ongoing development (Cortina *et al.,* 2016).

During the pilot, the CASCADE framework proved effective on a number of levels; improved knowledge of CYPMH, more efficient and frequent communication between stakeholders, and increased understanding of referral routes for CYP (Day *et al.,* 2017). Evaluation of the trial also suggested that whole school staff knowledge improved, resulting in more timely, appropriate referrals to CAMHS, although the report acknowledges this is harder to quantify (Day *et al.,* 2017). The '*Agreed point of Contact*' within CAMHS demonstrated the largest improvement with 0% of participants still regarding it as 'a major challenge' at the end of the year's pilot (Cortina *et al.,* 2016, p13). As a result, £9.3 million over 4 years, has been set aside by the DfE for training schools in using the CASCADE model through 2-day workshops offered to 20 schools at one time (Cunliffe, 2019); as the programme is externally funded, CCGs will not be charged for the training (AFNCCF & DfE, 2019). However, senior stakeholders within CYPMH services must ensure that all partners fulfil the demands placed on them for collaboration to work.

CCGs

As the training is about improved integration and communication, it is the responsibility of the CCG to govern implementation and ensure that sessions consist of

- the commissioning lead and local authority representative to facilitate and provide oversight,
- practitioners and managers from within NHS CAMHS,
- DSLMH from schools

(AFNCCF & DfE, 2019)

Research emphasises the importance of this role in creating structure and governance to enable

effective collaboration (Granrud, Anderzèn-Carlsson, Bisholt, & Steffenak, 2019).

Schools

Despite the role of DSLMH not being statutory in schools (DoH/DfE, 2017; PWBMHS, 2018), analysis of the Link trial demonstrates that it is important that schools have a senior lead as a single point of contact and that they fully commit to creating a whole school response to the mental health needs of CYP (Day *et al.,* 2017). Granrud *et al.* (2019) argue that it is the school and teachers that are the strongest determinants of successful collaboration and implementation of integrated working. Hence, school leaders must ensure a culture and environment in which the mental health needs of pupils and staff is valued regardless of academic and curriculum pressures.

CYPMH services

As health professionals are not a constant in the school, Granrud *et al.* (2019) qualitative study revealed some found it difficult to be accepted into the school culture and were often overlooked. The research emphasised the importance of them having a physical presence within schools in addition to acting in an advisory capacity. Whilst this study was small, involving just 18 public health nurses, it does highlight some of the potential issues implementing the CASCADE framework and ultimately the Green Paper; it is important therefore, that health professionals are active and assertive in their role through supporting with workable school-based resources and in defining clear referral processes for school leads to follow (Day *et al.,* 2017). It is also vital that CCGs ensure their prominence within the programme (Granrud *et al.,* 2019).

Statistically, the numbers of CYP presenting with mental health difficulties is increasing (NHS Digital, 2018), however services are struggling to cope with demand evident from increased waiting times and the failure of up to 75% of young people to meet the threshold for CAMHS (Children's Commissioner, 2016). Consequently, schools are increasingly the first place young people and their families look to for support. The government have announced its intention to utilise this through the use of collaborative working between educational and mental health services. The CASCADE framework piloted by the Schools Link Project offers a practical solution for stakeholders to begin this process, however this will only work if all partners have shared goals and vision, if there are clear lines of communication and roles, and if all stakeholders are active and committed to working in partnership to overcome the inevitable obstacles that will present.

References

Anna Freud Centre for Children and Families & Department for Education. (2019). Mental health services and schools and colleges link programme 2019-2020: a guide for CCG leads. Retrieved Feb.12 2020, from: https://www.annafreud.org/media/9763/the-link-programme-final.pdf

Care Quality Commission. (2017a). Review of children and young people's mental health services. Retrieved Feb.12 2020, from: https://www.cqc.org.uk/sites/default/files/20171103_cypmhphase1_report.pdf

Care Quality Commission. (2017b). Review of children and young people's mental health services. Phase One supporting documentation: Summary of recent policy and literature. Retrieved Feb.12 2020, from: https://www.cqc.org.uk/sites/default/files/20171027_cypmhphase1_literaturereview.pdf

Care Quality Commission. (2018). Are we listening? Review of children and young people's mental health services. Retrieved Feb.12 2020, from: https://www.cqc.org.uk/sites/default/files/20180308b_arewelistening_report.pdf

Children's Commissioner. (2016). Lightning review: Access to child and adolescent mental health services, May 2016. Retrieved Feb.12 2020, from: https://www.childrenscommissioner.gov.uk/wp-content/uploads/2017/06/Childrens-Commissioners-Mental-Health-Lightning-Review.pdf

Cortina, M., Saunders, F., Smith, J. & Wolpert, M. (2016). Mental health service and school link pilot: Workshop findings and feedback. Retrieved Feb.12 2020, from: https://www.annafreud.org/media/9752/mental-health-service-and-schools-link-pilot-report.pdf

Cunliffe, M. (2019). National mental health programme to bridge gap between schools and colleges and NHS services. Retrieved Feb.12 2020, from: https://www.annafreud.org/insights/news/2019/07/national-mental-health-programme-to-bridge-gap-between-schools-and-colleges-and-nhs-services/

Day, L., Blades, R., Spence, C. & Ronicle, J. (2017). Mental Health Services and Schools Link Pilots: Evaluation report Final report February 2017. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/590242/Evaluation_of_the_MH_services_and_schools_link_pilots-RR.pdf

Department for Education. (2018). Mental health and behaviour in schools. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/755135/Mental_health_and_behaviour_in_schools__.pdf

Department of Education. (2019) Email regarding designated senior lead for mental health, September 24, 2019. Retrieved Feb.12 2020, from: http://www.thrivingfutures.co.uk/444551355

Department of Health. (2015). Future in mind. Promoting, protecting and improving our children and young people's mental health and wellbeing. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/414024/Childrens_Mental_Health.pdf

Department of Health & Department for Education. (2017). Transforming children and young people's mental health provision: a green paper. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664855/Transforming_children_and_young_people_s_mental_health_provision.pdf

Frith, E. (2016). CentreForum commission on children and young people's mental health: state of the nation. Retrieved Feb.12 2020, from: https://epi.org.uk/wp-content/uploads/2018/01/State-of-the-Nation-report-web.pdf

Granrud, M. D., Anderzèn-Carlsson, A., Bisholt, B. & Steffenak, A. K. M. (2019). Public health nurses' perceptions of interprofessional collaboration related to adolescents' mental health problems in secondary schools: A phenomenographic study. *Journal of Clinical Nursing*, 28(15-16), 2899-2910. doi:10.1111/jocn.14881

H. M. Government. (2017). Prime Minister unveils plans to transform mental health support. Retrieved Feb.12 2020, from: https://www.gov.uk/government/news/prime-minister-unveils-plans-to-transform-mental-health-support

House of Commons Education and Health Committees. (2017). Children and young people's mental health —the role of education. First Joint Report of the Education and Health Committees of Session 2016–17. Retrieved Feb.12 2020, from: https://publications.parliament.uk/pa/cm201617/cmselect/cmhealth/849/849.pdf

Joint Commissioning Panel for Mental Health. (2013). Guidance for commissioners of child and adolescent mental health services. Retrieved Feb.12 2020, from: https://www.jcpmh.info/wp-content/uploads/jcpmh-camhs-guide.pdf

Lendrum, A., Humphrey, N. & Wigelsworth, M. (2013). Social and emotional aspects of learning (SEAL) for secondary schools: implementation difficulties and their implications for school-based mental health promotion. *Child & Adolescent Mental Health*, 18(3), 158-164. doi:10.1111/camh.12006

Murray, J. J. (2010). Very early predictors of conduct problems and crime: results from a national cohort study. *Journal of Child Psychology & Psychiatry*, 51(11), pp 1198-1207

NHS Digital. (2018). Mental health of children and young people in England, 2017 summary of key findings. Retrieved Feb.12 2020, from: https://files.digital.nhs.uk/A6/EA7D58/MHCYP%202017%20Summary.pdf

NHS England. (2019). Transforming children and young people's Mental Health Support Teams and pilots. Retrieved Feb.12 2020, from: https://www.england.nhs.uk/mental-health/cyp/trailblazers/mh-support-teams/

Parkin, E., Long, R., Gheera, M. & Bate, A. (2019) House of commons briefing paper number 07196: Children and young people's mental health – policy, services, funding and education. Retrieved Feb.12 2020, from: https://researchbriefings.files.parliament.uk/documents/CBP-7196/CBP-7196.pdf

Partnership for Well-being and Mental Health in Schools. (2018). Next steps on the Green Paper on children and young people's mental health. Retrieved Feb.12 2020, from: https://www.naht.org.uk/news-and-opinion/news/pupil-well-being-news/next-steps-on-the-mental-health-green-paper-government-responds-to-consultation/

Public Health England. (2018). School aged years high impact area 1: Resilience and emotional wellbeing. School nurses leading the healthy child programme 5-19. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/754799/school_aged_years_high_impact_area_1.pdf

Public Health Profiles. (2020). Children and Young People's Mental Health and Wellbeing. Retrieved Feb.12 2020, from: https://fingertips.phe.org.uk/profile-group/mental-health/profile/cypmh/data#page/0/gid/1938133090/pat/6/par/E12000002/ati/102/are/E08000015

Reinke, W. M., Stormont, M., Herman, K. C., Puri, R. & Goel, N. (2011). Supporting children's mental health in schools: teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26(1), 1-13.

Shelemy, L., Harvey, K. & Waite, P. (2019). Supporting students' mental health in schools: what do teachers want and need? *Emotional and Behavioural difficulties*, 24:1, 100-116, DOI: 10.1080/13632752.2019.1582742

Sutcliffe, A. (2019). Shaping the future of the NMC, NHS Expo, September 5, 2019, Manchester Central. Retrieved Feb.12 2020, from: http://www.thrivingfutures.co.uk/444551355

Timpson, E. (2019). Timpson review of school exclusion. Retrieved Feb.12 2020, from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/807862/Timpson_review.pdf

University College London. (2019). Educational Mental Health Practitioner (EMHP) Programme London & Essex Recruitment 2019. Retrieved Feb.12 2020, from: https://www.annafreud.org/media/9697/essex-emhp-recruitment-pack-info.pdf

Weare, K. (2000). *Promoting mental, emotional and social health: a whole school approach*. London: Routledge.

Wolpert, M. & Cortina M. (2018). CASCADE framework: Supporting joint working between education and mental health professionals. Retrieved Feb.12 2020, from: https://www.annafreud.org/media/9754/a4-layout-cascade-camhs-300518a_spread.pdf

Young Minds. (2015). Annual report 2014-15. Retrieved Feb.12 2020, from: https://youngminds.org.uk/media/1234/279430-youngminds-annual-report-final.pdf

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Headteachers' most important task: changing mental models of teachers for effective health promotion initiatives

Building and sustaining health promotion in schools has been viewed as a complicated process that involves continuous alterations and modifications in order for progress to be realised. School health promotion initiatives are not considered effective in developing countries like South Africa because the underlying behaviours, norms and beliefs of teachers are not affected (Friend & Caruthers, 2012). In addition, although teachers in a study conducted in Hong Kong perceived that there was a need to provide lifestyle modification education to students, they did not see themselves as influential person to promote healthy lifestyle (Cheng & Wong, 2015). In the same vein, research indicates that teacher commitment to, and identification with, health-promoting activities is essential for sustained teacher engagement with health promotion in schools (Jourdan, Simar, Deasy, Carvalho & McNamara, 2016). There is also a consensus that improper health attitudes would limit teachers' chances of being good health models for their students (Alnasir, 2004). The success of making a school a health-promoting one depends largely on commitment and a sense of ownership by the individual school. How people construct knowledge, attitudes and beliefs can affect their actions. In other words, attitudes, behaviours and commitment are linked to how people think and perceive situations. McNab (2013) notes that effective school health promotion depends more on a change in mindset rather than the provision of major new resources. This statement suggests that a change of a mental model can lead to a change of behaviour. New ways of thinking about implementation of health programmes are required to improve school health promotion (SHP).

Similarly, there have been suggestions in the literature on how schools can improve their health-promoting initiatives. For instance, empowerment of staff through "shared ownership" of change and innovation within the school is suggested by O'Hara & McNamara (2001). Such efforts to change teachers' attitudes towards SHP may be either unsuccessful or met with resistance if their mindset does not change. Based on these challenges, this study argues that without changed mental models, SHP cannot be effective.

No study could be found that examined mental models of teachers involved in SHP in order to explore how they can be altered. This study contributes to the debate about mechanisms that can be used to improve the implementation of SHP. For this reason, the aim of this investigation was to examine the mental models of teachers involved in SHP and explore how to ultimately modify mental models that resist change. As we believe that the task of modifying the mental models of teachers is the responsibility of the headteachers, the following section provides a rationale for such credence.

Changing mental models of teachers in school health promotion as the headteachers' task

School managers are regarded as having a great influence on priority areas performed at schools. They are important champions who provide leadership to school health promotion initiatives. As the wealth of educational research indicates that school leaders do make a difference in school effectiveness and school improvement (Huber 1999; Scheerens & Bosker 1997; Townsend, 2007), the same can be expected with regard to the success of SHP activities.

Headteachers have always been entrusted with certain tasks that can be linked to influencing the mind sets of the school community. For instance, in building and maintaining high motivation through vision building, successful school principals have the ability to emphasise the necessity, importance and benefits of change processes to all school members. With a shared vision, a school stands a better chance of having a sustainable health promotion as spaces for creation of new ideas could be created as the vision is communicated. Principals are regarded as change agents leading the school community to adapt and accept changes that may be initiated from outside the organization. The principal's openness to change is positively and significantly correlated with the school community's openness to change (Cagle, 2012). The implication is that their mindset is as important as that of teachers, since they are charged with a responsibility of encouraging the school staff to sustain new practices and activities.

Mental models as theoretical framework

One way of getting into the minds of individuals in organizations, and enhancing the link between individual and organisational learning, is through understanding the concept of a mental model (Rook, 2013). Mental models are important for the understanding of the construction of knowledge and the actions of an individual (Kim, 2004; Senge, 1990). Various researchers define mental models differently, but the description by Kim (2004), as implicit and explicit understandings, ideas, memories and experiences will suffice for this research. However, researchers are in agreement that a mental model exists only in the mind of the individual and thus internally held (Kim, 1993; Senge, 1990; Vazquez *et al.,* 1996; Doyle & Ford, 1998). A mental model is an internal representation of external environment, personally and internally created by the person himself or herself (Rook, 2013). It is developed through a subjective interpretation of an individual's experiences to make inferences based on the available information and predictions about future states (Held, Knaff & Vosgerau (2006). Mental models can be considered to have been constructed from an individual's own experience and their own bases of knowledge and concepts. In turn, mental models affect individual actions. Rook (2013), and Jensen & Rasmussen (2004), maintain that a mental model has the capacity to influence, or affect, how an individual makes judgments and consequently affect how a person acts.

Two or more people can be said to hold a shared mental model (SMM) if they utilize mechanisms that lead to similar descriptions, explanations, and predictions of the system (Avnet, 2015). Mental models in the context of teams have more to do with establishing and maintaining common ground (Clark, 1996), and building team mental model. According to Scheutz, DeLoach & Adamsteam (2017), mental models are critical for making sense of team activities, for understanding the dynamic changes of team goals and team needs. Lee, Johnson, Lee, O'Connor & Khalil (2004), proposed that a SMM has five components: team knowledge, team skills, team attitudes, team dynamics and team environment.

The idea behind understanding and investigating mental models of school leaders and teachers involved in SHP initiatives in this research is to use the knowledge learned from them to shape their actions. The mental model construct was used to explore the cognitive and social dimensions of human–task interactions. Thus, mental models have been elicited to understand the basis for people's actions (Baynes *et al.,* 2011); to integrate different perspectives to improve the overall understanding of a given system (Özesmi & Özesmi 2004); to explore similarities and differences in stakeholders' understanding to improve communication (Abel *et al.,* 1998); and to support decision-making and negotiation processes in contentious situations (Dray *et al.*, 2006).

Research method

In this section we explain the research design and participants, data collection and analysis.

Research design and participants

We conducted a qualitative study (Berg & Lune, 2012), focusing on the mental models of teachers involved in SHP. We thought that this design would provide us with a better understanding of the research problem. Participants in this research comprised of eight school leaders (4 principals, 2 deputy principals and 2 Heads of Departments) as well as eight teachers involved in SHP. Four

participants in each of the four schools that participated agreed to partake in the research, each school with two teachers and two managers. The participants were purposively selected as only teachers who had been involved in school health promotion for more than five years were selected and managers of health promoting schools.

Data collection and analysis

For data collection, we relied on two data gathering tools: a combination of open-ended and semi-structured interviews (direct elicitation) to elicit participants' understanding of SHP and their perceptions of its implementation in their schools; and indirect mental model elicitation in the form of unstructured observation. The idea for investigating their understanding was to determine their knowledge of the task in terms of the focus, detail and method of delivery. Their common understanding of the SHP concept is also imperative for shared mental models. The rationale behind the use of oral-based procedures is grounded on Carley & Palmquist' (1992), postulation that the symbolic or verbal structure extracted from a text, such as an interview transcript, can be considered a sample of the full symbolic representation of the individual's cognitive structure. To this end, Carley & Palmquist (1992), believe that language provides a "window through which to view the individuals mind". The observation technique was centred on theory in use, which is what people do, as opposed to what they say.

Accordingly, we identified concepts using open-ended interviews and by asking interviewees to list items relevant to our topic, for example, what SHP is about, effective way of implementing health programmes, how it is implemented in the schools. Thereafter, in a second phase a different set of interviews were conducted where participants were asked to sort, rank and determine the similarity of responses across interviewees or items. We conducted two individual interviews with each of the sixteen participants over a period of five months. In this period observations were done two times. The focus was on observations of programmes at the time when they were implemented.

As the data gathering involved "elicitation", what that means in this research is important. The term "elicitation" refers to the process of inquiry to encourage a person to externalize a mental model (Jones, Ross, Lynam & Perez, 2014). We relied on a situated procedure involving eliciting participants' mental models in schools, locations corresponding to the phenomena to be elicited. Interviewing participants in schools was done with the understanding that the physical context has an effect on the mental representations participants formed and used in a given situation.

All interviews were audio-recorded and transcribed immediately after each interview was finalized. As alluded earlier, we relied on the unstructured observation to enrich the verbal contributions of the participants. Following data collection, we analysed the data using content analysis (Berg & Lune, 2012), which yielded three themes.

Research Results

The data analysis generated three themes regarding the mental models of teachers involved in SHP. The themes are discussed below.

How School Health Promotion should be conducted

It was indicated by participants that community involvement in the creation and maintenance of healthy school environments was very important. Participants were aware that schools would not be vandalized if there was a sense of community ownership as the community would jealously look after them. One participant concurred with this statement by saying: *"I think everybody in the school community must be involved. Thugs vandalize the school and steal the very things we as a school need to make the school environment better, they cut the fence, break the windows and steal electric plugs in the classes so it becomes hard to keep the school clean and safe for learners under such conditions. If they are involved they will curb vandalism"*. Furthermore, the school leaders are to educate the community about what they need to do in pursuit of creating healthy environments, both at school and at home. The emphasis of community involvement is also on social ills such as cyber-bullying. In this instance one participant elaborated as follows: *"after attending a workshop on bullying I invited parents and trained them on cyberbullying and the importance of checking what is happening on their children's cellphones, them knowing helps us as they will also be vigilant and be involved in school interventions"*.

The majority of the participants emphasized the importance of collaboration and stakeholder

involvement. For instance, participants expressed the following thought: *"The principal should make the school community aware of what a healthy school is and what needs to be done for it to be a healthy school; involve as many stakeholders including teachers and learners in all programmes pertaining to healthy school initiatives"; collaborations are crucial. We need everyone to support the idea and to work with us to ensure that whatever we plan is implemented. We need the learners to understand the importance of healthy habits so that the lessons learnt can be taken to communities etc."*. The participants mentioned valuable links that should be established with other government departments. One participant indicated that: *"the school has to collaborate with the social development, the police and the health departments. We have a nurse, a police officer and a social worker that are working with our school, so that in case we need advice or support they are there to assist. They also have their own programmes in which they sometimes request to present to learners, such collaborations need to be strengthened in order to be sustainable"*.

Concerning health programmes, participants took cognizance of the importance of safety of learners and its contribution to effective teaching and learning. One participant reported: *"…we have to make sure that there are no slippery surfaces or dangerous equipment lying around that can hurt learners when playing during breaks, school safety is the priority"*. Some teachers mentioned programmes pertaining to clean physical environment, a participant said: *"The Y-cap programme deals with recycling, cleaning, beautification and greening of the school environment"*. Participants emphasized the significance of maintenance of the school infrastructure. They elaborated as follows: *"School buildings have to be maintained, learners cannot learn in dilapidated, filthy buildings"*; *"schools have to be welcoming, classrooms well ventilated and clean, with running water, clean ablution facilities and electricity"*. Learners are to be encouraged to adhere to hygienic habits at all times and be fed in order to better their health and well-being. This was evidenced by the participants who spoke about such programmes. One participant reported that: *"in health education learners are to be taught about health issues and encouraged to focus on personal grooming, they have to be fed as they cannot focus when hungry"*.

In addition, establishment of effective health committees was indicated as imperative in SHP. To this effect, one participant reported: *"the principal has to make sure that the health committee is there and members should attend workshops to get information about school health promotion"*. Participants also acknowledged the importance of being familiar with the national school health policies and development of school-based policies. Two participants from different schools indicated: *"officials always encourage us to be familiar with the contents of health policies, health promotion depends on our understanding of these policies"*; *"policies have to be developed by all stakeholders in order to accommodate the context and the culture of the school and also to have a common understanding of the processes"*.

Attitudes, decisions, actions and mindset

Most principals understood and appreciated the efforts of the Department of Basic Education of encouraging schools to be health promoting. Many of them attested to the fact that all the workshops that they had attended had added value to their endeavours of making their own schools compliant with the notion and format of healthy schools. For instance, two participants reported: *"I have attended a number of workshops, many of them have assisted me to make the school a healthy place"*; *"… they have made me a better principal because I learn from them and as far as possible, implement whatever I learnt here at school"*. But teachers perceived the workshops as a waste of their valuable time as they said: *"I prefer attending workshops about the curriculum, workshops on health promotion are a waste of time"*; *I attend workshops about health promotion because I have to, not because I want to"*.

Another pertinent factor is the attitude of individuals within a school. Most teachers complained about their workloads. As such, they perceived the promotion of school health as an added burden to their already overloaded work. Linked to this was the issue of whose responsibility it is to ensure school health promotion. It was surprising that even the principals also indicated SHP as not their responsibility. This was articulated by almost all participants mentioning that: *"School health promotion should not be the responsibility of the teachers, except for health education, they are already overloaded"*; *"I do not understand why school health promotion is not the responsibility of the nurses and social workers they know better, they are trained, with relevant degrees"*; *"there is no time for anything else after teaching so many classes"*; *"what we are responsible for is to teach and learners must pass at the*

end of year".

The communication of SHP initiatives between schools and their communities was lacking, the collaborations were not effective. The lack of community engagement was highlighted by all participants who said: *"Communities are not fully involved in health programmes except when they volunteer as food handlers or assisting with garden projects"*; *"communication with the school community is lacking, we only report on what we do"*; *"schools in township struggle with gangsterism, as the community is not involved, winning this battle is a struggle for our schools"*.

Some decisions taken by the school leaders were indicated as bias. Such decisions led to conflicts within schools and intended programmes were stifled. Participants reported: *"…if it is a programme that the principal likes he will motivate us to support it and make sure that it happens, everyone would be involved"*. The ineffectiveness of the implementation of health programmes also seemed to be due to "selectiveness" in the teachers' perception of what is important: *"I like helping out with the cleaning of the environments and feeding scheme, but nothing more than that"*; *"I do not mind teaching Life Orientation which includes health education in class, but other than that, it's a big no"*; *"cleanliness and beautification of the surroundings make sense to me, it is also important for learners to be fed, most come from very poor families where there is scarcity of food, I can be involved with all that, everything else can be taken care by others"*. Participants highlighted lack of commitment and involvement of teachers which was aggravated by lack of processes to deal with such behaviours. They mentioned that, *"there is no commitment from everybody in the school community in order to be able to implement the programmes well, some teachers do not want to be involved and there is nothing done about this"*; *"same teachers would be compelled to lead health committees for ever as others do not want to take part"*.

Duration of the programmes and time of involvement of teachers

All participating schools had been involved in health promotion for years, as the schools are residing in poor communities. Seven participants had been involved in the programmes for more than five years while the rest mentioned more than 10 year involvement. Participants indicated different reasons for their involvement with SHP, which included the following: *"Ever since I started in this school in 2010, I have been involved, I was asked by the principal who indicated that after 2 years, others will take over, but that never happened"*; *"I have been a principal here for 15 years, the school had already been implementing health programmes years before I started here"*; *"my observation over the years I have been involved is that we are effective in others and not in others, we do not have strategies to improve maybe because of how we see health promotion"*.

Discussion

The aim of this study was to examine the mental models of teachers involved in promoting healthy schools and how mental models that resist change can ultimately be modified. The focus of data collection was on the participants' understanding of the concept of SHP and their perceptions of how it was implemented in their schools. The theory of Senge's mental models was used as lens to understand how participants perceived SHP and the actions they took to implement programmes. The findings we report on in this article may make a valuable contribution to the existing body of knowledge by means of the unique approach taken in this study. Participating schools seemed to comprehend the concept of SHP. However, their decisions and actions were contrary to their understanding. Understanding their actions and decisions was important as literature indicates that actions make a mental model explicit. Moreover, although all the participating schools implemented health programmes consistently, on a systematic basis and over a sustained time period, their perception about them did not change.

The first finding pertained to how participants understood SHP, this is paramount as the knowledge becomes the driving force and a determinant of effectiveness of SHP initiatives. Participants seemed to be aware of what was expected of them and had all three forms of understanding: declarative, procedural and strategic. The understanding of the concept of SHP has to do with its aim which concerns the improvement of physical and social environments, teaching and learning and personal and social development. These results are corroborated by those of Jourdan, Simar, Deasy, Carvalho & McNamara (2015), in which teachers had a broad conceptualisation of their role in health promotion. Participants stated establishment of health committees, development of health policies and programmes which all pertain to setting up structures in place for effective implementation of health promotion initiatives. Community, teacher, learner

involvement and collaborations and partnerships were indicated as imperative not only for capacity building but also for the buy in of all stakeholders to strengthen and sustain the initiatives. Moreover, participants revealed multiple programmes that should be implemented in schools including those that address emotional and mental health, physical wellbeing and those that empower and equip learners with knowledge and skills to live healthy lives. The results also attest that participants had procedural understanding in that they were aware of all the processes and procedures for the implementation of programmes, for example: school nutrition programme; ensuring safety; keeping the environment clean and healthy; and taking care of the infrastructure. They also took cognizance of the fact that workshops were important in empowering them with skills and knowledge they needed to implement programmes. Participants indicated that support for the programmes was key and that there needs to be clear communication about processes so that everyone understands his/her role. Thus, it can be argued that health promotion in the participating schools was not effective because teachers did not have an understanding or comprehension of the scope, practices and determinants of the project.

This study also found a disconnect between the actions of the participants and their understanding of health promotion. It is believed that understanding affects decisions, actions and perceptions (Chermack, (2005). In contrast, in this research participants' actions were influenced by their mental models. Perhaps, based on this finding, it can be concluded that knowledge only does not guarantee effective implementation. Collaborations and community involvement were not effective as participants indicated not putting effort in building the partnerships. Communication with the stakeholders about health programmes was lacking. In this instance, members of the community are more likely to 'buy in' to the SHP project when it is firmly rooted in the communicated school vision and when they have control over its development and implementation. Some programmes were not implemented well because principals' own preferences, teachers' selectivity of certain programmes and lack of procedures to deal with lack of commitment and involvement.

In terms of negative perceptions, participants felt that health promotion is an add-on burden as they complained about a heavy teaching workload. They felt that if they were to focus their energies on health promotion, it would take away time they would spend on preparation for classes. Another factor involved health promotion as not really the responsibility of the teachers but of nurses and social workers. Participants indicated that they were trained as teachers, they were comfortable teaching health education but not with involvement in other programmes of SHP. This kind of thinking is not unique to South African teachers, as these findings are corroborated by those of Hill, Draper, De Villiers, Fourie, Mohamed, Parker & Steyn (2015), Elgar *et al.* (2015) and Bonell *et al.* (2014), which also indicated an individual's strong sense of whose responsibility school health-promotion should be, the workload of teachers and role ambiguity. This school of thought appeared to have contributed to the ineffectiveness of the schools' initiatives, the impression is that their failure was premised on their negative way of thinking about their involvement and contribution to health promotion. Consequently, success or failure of school health initiatives is determined, in part, by such mental models or ways of viewing SHP. In this research we argue that unless there is a growth mindset that supports SHP, a mindset of care that puts learners first, effectiveness in programme implementation can never be attained.

The third finding pertains to the fact that the participating schools had been involved in SHP for more than ten years. Participants had been executing health programmes for years. They alluded to the fact that they had implemented the programmes the same way without any plans for change. They realized that there was a contrast between their understanding of health promotion and how they actually effected it. In all the years they had not devised means to change the situation. It seems that the schools developed a fixed mindset that deterred them from adapting and growing. The change would have allowed the schools to operate differently and innovate to maintain their position of health promoting. Perhaps the reason for doing the same things over and over even if they did not yield good results is because such behaviours and attitudes may be unconscious and implicit. Attitude and more importantly behaviour change of anyone who ought to be involved in SHP,

cannot be accomplished by educating knowledge only.

Conclusion

We conclude that in order to change practices and interventions, mindsets or mental models must inevitably be an important focus of attention. In addition, research indicates that mental models can change, and the creation of new mental models is possible if the teachers in a school are willing to modify their behaviours. We are aware that based on the challenges highlighted above, there could be two solutions: to change the actions of the teachers by means of training or for them to modify their mindset. This research advocates for the latter as although it is difficult to change people's mindset, it is however, the most powerful and useful way to ultimately change behaviour and thereby affect results. The authors concur with Darlington (2016), who propose that a context-specific thinking should be applied to the implementation process, and the types of achievements that might be expected from it, whilst the intervention programme and its content remain the same. Following are practical steps that can be taken by headteachers to modify the mental models of teachers.

First, South Africa is a country with strong cultural beliefs where the majority of the population is Black. In Black cultures people are used to "imbizo" (in isiZululu and IsiXhosa) and "lekgotla" (Southern and Northern Sotho) where they are called to deliberate on matters of importance to the community. In such gatherings teachers could have an opportunity to talk freely about their views on SHP, and discussions about implicit models of their behaviour, thereby, providing a platform for exchange of ideas with community members and health professionals. Community gatherings are relaxed and non-judgemental. Getting people talking about how health programmes are implemented is the first step for teachers to understand their own mental models. In addition, this can lead to moving towards sharing of adequate mental models that alter thinking and action-taking for laying a solid foundation for effective SHP.

The second mental model modification strategy would be to organize debate sessions within and between schools. Challenging of inadequate mental models can be done through dialogue. Research indicates that mental models can be "extracted, examined and altered in a narrative format through a series of provocative questions about an organization's current and plausible future states (Georgantzas & Acar, 1995; van der Heijden, 1997). The debates about the important driving forces of SHP and extensive dialogue about how best to implement health programmes can be held with all stakeholders to facilitate team learning and a shared vision. Senge (1990), concurs with such a notion by proposing challenging of existing assumptions of organizational decision makers by questioning their mental models.

Additionally, Pfeiffer (2005), suggests building of a responsibility mindset. In the foregoing paragraphs, it was indicated that teachers felt that it was not their responsibility to promote health in schools. A responsibility mindset may be built by (1) getting people to acknowledge and accept that how they think about situations is under their volitional control-choice; and (2) allow them to emotionally experience and think about the pros and cons of alternative ways of thinking about situations (Pfeiffer, 2005). The suggestions for creating new mental models in this research indicate the pivotal role learning can play in such an endeavour as Johnson-Laird (1983), proposes. Because of this requirement for learning, changing mental models can be viewed as a developmental process that can be considered for teachers involved in SHP. This is based on the conviction that specific kinds of expertise require specific mental models that are assumed to develop over time and with experience.

References

Abel, N., H. Ross, & P. Walker. (1998). Mental models in rangeland research, communication and management. *Rangeland Journal*, 20:77-91.

Alnasir, L. (2004). Health attitudes of teachers. *Saudi Medical Journal*, 25(3):447-452.

Avnet, M.S. (2015). A network-based approach to organizational culture and learning in system safety. A paper presented in a conference on Systems Engineering Research. *Procedia Computer Science*, 44:588 – 598.

Baynes, J., Herbohn. J. & Russell. I. (2011). *The influence of farmers' mental models on an agroforestry extension program in the Philippines. Small-scale Forestry* 10:377-387. Retrieved Feb.12 2020, from: http://dx.doi.org/10.1007/s11842-010-9154-7

Berg, B.L. & Lune, H. (2012). *Qualitative research methods for the social sciences 8th edition*. Upper Saddle River, NJ: Pearson Education Inc.

Bonell, C., Humphrey, N., Fletcher, A., Moore, L., Anderson, R. & Campbell, R. (2014). Why schools should promote students' health and wellbeing. *British Medical Journal*, 348. https://www.bmj.com/content/348/bmj.g3078.

Cagle, K. E. (2012). *Faculty perceptions of principal support and change orientation in Virginia high schools*. ProQuest Dissertations & Theses Global.

Carley, K. & Palmquist. M. (1992). Extracting, representing and analyzing mental models. *Social Forces*, 70:601-636. http://dx.doi.org/10.1093/sf/70.3.601.

Cheng, N. & Wong, M. (2015). Knowledge and Attitude of School Teachers towards Promoting Healthy Lifestyle to Students. *Health*, 7: 119-126.

Chermack, T.J. (2003). Mental Models in Decision Making and Implications for Human Resource Development. *Advances in Developing Human Resources*, 5(4): 408-422. http://doi.10.1177/1523422303257373.

Clark, H. (1996). *Using language*. Cambridge, UK: Cambridge University Press.

Darlington, E. (2016) *Understanding implementation of health promotion programmes: Conceptualization of the process, analysis of the role of determining factors involved in programme impact*. PhD December 2016. Universite Jean Monnet.

Dray, A., Perez, P., Jones, N., Le Page, C., D'Aquino, P., White, I. & Auatabu, T. (2006). The AtollGame experience: from knowledge engineering to a computer-assisted role playing game. *Journal of Artificial Societies and Social Simulation*, 9:6.

Elgar, F. J., Pförtner, T.-K., Moor, I., De Clercq, B., Stevens, G. W. J. M. & Currie, C. (2015). Socioeconomic inequalities in adolescent health 2002–2010: A time-series analysis of 34 countries participating in the health behaviour in school-aged children study. *The Lancet*, 385(9982), 2088–2095.

Georgantzas, N. C. & Acar,W. (1995). Scenario-driven planning: Learning to manage strategic uncertainty. Westport, CT: Quorum

Hill, J., Draper, C., De Villiers, A., Fourie, J., Mohamed, S., Parker, W. & Steyn, N. (2015). Promoting healthy lifestyle behaviour through the Life-Orientation curriculum: Teachers' perceptions of the HealthKick intervention. *South African Journal of Education*, 35(1):

Jones, N.A., Ross, H., Lynam, T. & Perez, P. (2014). Eliciting Mental Models: a Comparison of Interview Procedures in the Context of Natural Resource Management. *Ecology and Society*, 19(1): 13-19. http://dx.doi.org/10.5751/ES-06248-190113.

Jourdan, D., Simar, C., Deasy, C., Carvalho, G. & McNamara, P. (2015). School health promotion and teacher professional identity. *Health Education*, 116 (2): 106 – 122.

Jourdan, D., Stirling, J., Mannix McNamara, P. & Pommier, J. (2011). The influence of professional factors in determining primary school teachers' commitment to health promotion, *Health Promotion International*, 26(3): 302-310.

Lee, A. (2004). The concept of health promoting schools to enhance positive youth development. *Asia Pacific Journal of Public Health*, 16:S3-6.

Morgan, M. G., Fischhoff, B., Bostrom, A. & Atman. C.J. (2002). *Risk communication: a mental models approach*. Cambridge University Press, New York, New York, USA.

Özesmi, U. & Özesmi, S.L. (2004). Ecological models based on people's knowledge: a multi-step fuzzy cognition mapping approach. *Ecological Modelling*, 176:43-64. http://dx.doi.org/10.1016/j.ecolmodel.2003.10.027.

Scheutz, M., DeLoach, S. & Adamsteam, J. (2017). A Framework for Developing and Using Shared Mental Models in Human-Agent Teams. *Journal of Cognitive Engineering and Decision Making*, XX(X): 1–22. DOI: 10.1177/1555343416682891.

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Emotional health and wellbeing in young people: a report about a million 8 to 15-year-olds

This article has been taken from the report, "Emotional Health and Wellbeing in Young People in 2019", (SHEU, 2019). The report is researched and written by the Schools Health Education Unit (SHEU).

SHEU provides a range of services to those involved in the planning, providing and commissioning of local health and education programmes. The survey work in schools uses the Health Related Behaviour Questionnaire (HRBQ), which has been evolving and developing since 1977 and collects robust baseline data. The primary and secondary versions of the HRBQ have been used in 14,894 separate school surveys, some schools repeating surveys of their pupils on many occasions, and nearly two million pupils between the ages of 9 and 16+ have taken part in the surveys from across the UK.

Concern about emotional wellbeing and the evidence

We know there is much concern about young people's emotional wellbeing. For example, we can see the headlines from the Telegraph in July 2015, "Mental health of pupils a 'top concern' for head teachers - Two-thirds of school leaders are worried about pupils' mental health" (Telegraph, 2015). However, solid data justifying these concerns are hard to find in the UK.

For example, there is a robust series of results from NHS Digital showing the prevalence of any emotional, behavioural or hyperactivity disorder among 5-15 year-olds, which has exactly three data points: 1999=9.7%, 2004=10.1%, and 2017=11.2%. The small rise is accounted for by a rise in emotional disorders from 4.3% in 1999 to 5.8% in 2017 (NHS Digital, 2017). This rise is of importance, but it is hard to account for what is sometimes described as a generational shift in mental health problems.

A review by Pitchforth and colleagues looking at some other sources of robust evidence from surveys of young people concluded:

- "a striking increase in the reported prevalence of long-standing mental health conditions since 1995" (from about 1% in England in 1995 to 5% in 2014)
- "no consistent increase in reported psychological distress among CYP over the last two decades", when measured using scores in validated questionnaires
- "some evidence of worsening trends in psychological distress and well-being of young adults in recent years" (since 2011)

(Pitchforth et al., 2018)

This provides both support and confusion for our thoughts about young people's emotional wellbeing. The Pitchforth paper looked at national surveys, but there is a lot of variation under the surface, we expect. For example, Geulayov and colleagues in 2016 reported on trends in non-fatal self-harm in three centres in England, 2000–2012 (Geulayov et al., 2016). Among males since 2008, reports in Manchester went up, while in Oxford, if anything, they went down. This, we hope, shows the value of local data, such as that provided by our HRBQ surveys. You would draw very different conclusions about the changes in self-harm prevalence among males if you were in Manchester or Oxford.

The consequences of poor emotional wellbeing

Poor emotional wellbeing is a problem in itself, and, we suspect, may lead to more serious mental health problems.

Health educators are also interested in emotional wellbeing as a factor in risky behaviours; we will see some of this evidence later. Why is poor emotional wellbeing associated with risky behaviours? Perhaps unhappiness leads young people to suppress negative emotions through substance use, or instead it could make young people more vulnerable to peer influence. (Or, both poor emotional wellbeing and risky behaviour are connected only through a third factor like poverty.) We will return to this issue later in the article.

The No Worries? report

In 1998, we produced a report, "No Worries?" (Balding et al., 1998), looking into the worries and concerns that affect young teenagers in our society. In the two decades since publication, we have seen an increase in awareness of mental health as well as the introduction and spread of social media and smartphones, with little currently known about the affects these could have on the emotional health and wellbeing of the people using them.

The key findings from the 1998 report were:

- It is normal for all people to worry at some point in their life; the issue is identifying when worrying becomes a problem, and how to manage our worries better.
- The main worries for young people were: the way they look; friends; family and drugs.
- The most common worry among 12-15yo females was how they look (58% - the next highest worry was "family problems" at 46%).
- 63% of Year 10 females said they would like to lose weight.

As the title of the 1998 report suggests, much of the content focuses on worrying, particularly links between worries and responses to other questions.

For example, it was found that people who worry more were also:

- More likely to have used drugs
- More likely to have low self-esteem
- More likely to feel uneasy when seeing their GP
- More likely to report having accidents
- More likely to consider their health when choosing what to eat
- Less likely to have adults they can trust
- Less likely to live with their mother and father together

These findings are largely duplicated in the latest 2019 report, but we have been able to extend our analysis in a number of ways.

Emotional health and wellbeing in young people in 2019

This new report summarises recent findings from large samples of young people surveyed in schools from local authorities across England between 1997 and 2018, with an in-depth analysis of the samples from 2017-18. The pupils were from Year 4 (8-9yo), Year 6 (10-11yo), Year 8 (12-13yo) and Year 10 (14-15yo).

Headline Findings

- Boys had significantly higher self-esteem than girls; this difference becomes more marked as children get older. 32% of boys in Year 4 had high self-esteem in 2018; this compares with 28% of girls in Year 4, 47% of boys in Year 10, and 29% of girls in Year 10. Scores for primary pupils are higher than ever.
- Pupils report decreasing levels of satisfaction as they get older, with the gap for girls widening more than for boys (74% of boys/75% of girls in Year 4 drops in Year 10 to 62% and 48%, respectively).
- Girls worry significantly more than boys, particularly as age increases. The biggest differences are for issues including school-work, family and the way they look.
- Family was the most common source of support or information for most topics.
- When young people have a problem or feel stressed, they often listen to music, but also report talking to family and thinking on their own. 6% of older females report self-harm when stressed.
- Boys feel more at ease when meeting people of their own age than girls.
- The oldest girls (Year 10, 14-15yo) score less well than all other groups for self-esteem, resilience, worrying (for any topic and multiple topics), satisfaction with life and social confidence; girls' scores on well-being scales are not much difference to those boys of the same age.

Trends

- Worrying about school-work increased among all groups since 2002, especially among 14-15yo girls.

- Self-esteem seems stable or improving in the primary phase, but self-esteem among 14-15yo girls has declined in the last decade.
- Satisfaction with life has declined among secondary-age pupils since 2013, and especially among the 14-15yo girls.

Annual cycles

- Over the course of the school year, from September to July, there appears to be an overall fall in self-esteem of secondary pupils from Sept-Feb, a rise in fear of bullying Sept-July, and a rise in worry about schoolwork Sept-July. (These changes are not age-related, as we can see Y10 pupils' self-esteem is not lower than that in Y8, while their fear of bullying is lower.)

Associations

- Lower self-esteem is associated with less happiness with their weight, with lower likelihood of exercising, of eating a 'proper' breakfast (of a drink and something substantial to eat), a lower likelihood of getting 8 hours' sleep, and is strongly associated with the experience of and fear of bullying
- Looking at computer games, media and Internet use, the highest levels of use are associated with lower self-esteem and wellbeing, while there is some evidence that moderate levels of phone and Internet use are linked with the highest levels of wellbeing. High levels of homework are also associated with poorer wellbeing.
- Low self-esteem is associated with increased use of cannabis, while high self-esteem is linked with lower use. We have previously reported this type of association for alcohol.

Trends in associations

- High self-esteem was formerly associated with increased use of alcohol and cannabis, but in the last decade low self-esteem has been associated with increased use of both substances, while high self-esteem is linked with lower use - the reverse of the previous pattern.

Conclusions

We believe there is much support in our data for the widely held belief that young people's emotional wellbeing has declined in recent years, as seen in results for self-esteem, satisfaction, and worries.

This decline is found in secondary school pupils rather than primary school pupils, and most strongly in Year 10 females (14-15yo).

There may be some important consequences of poor emotional wellbeing, as it is associated with greater levels of risky behaviour and lower levels of health promoting behaviour, including more skipping meals, lower levels of exercise, less time asleep, and higher levels of substance use and bullying. Directions of cause and effect are not shown, but poor emotional wellbeing is an outcome of importance in itself, whatever effect it may be producing in other behaviours.

There are many links between poor emotional wellbeing and various aspects of screen time, but these are not large enough to account for the trends and patterns that we see, and neither is the relationship straightforward.

We have reported here for the first time a decline in self-esteem during the school year, from September to February, while fear of bullying and worry about school work both increase during the school year. The last is perhaps an acceptable consequence of end of year exams, but the other findings are more surprising and unwelcome.

References

Balding, J.W., Regis, D. & Wise, A. (1998). No Worries? Young people and mental health. *Schools Health Education Unit*, 61pp

SHEU, (2019). *Emotional Health and Wellbeing in Young People in 2019.* Retrieved Feb.18 2020, from: http://sheu.org.uk/EHWB2019/twt

Geulayov, G., Kapur, N., Turnbull, P., Clements, C., Waters, K., Ness, J., Townsend, E. & Hawton, K. (2016). Epidemiology and trends in non-fatal self-harm in three centres in England, 2000–2012: findings from the Multicentre Study of Self-harm in England. *BMJ Open*, 6:4. Retrieved Feb.18 2020, from: https://bmjopen.bmj.com/content/6/4/e010538.long

NHS Digital, (2017). *Mental health of children and young people in England*. Retrieved Feb.18 2020, from: https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017

Pitchforth, J., Fahy, K., Ford, T., Wolpert, M., Viner, R.M. & Hargreaves, D.S. (2018). Mental health and well-being trends among children and young people in the UK, 1995–2014: analysis of repeated cross-sectional national health surveys. *Psychological Medicine,* 49(8), 1275-1285. Retrieved Feb.18 2020, from: https://www.cambridge.org/core/journals/psychological-medicine/article/mental-health-and-wellbeing-trends-among-children-and-young-people-in-the-uk-19952014-analysis-of-repeated-crosssectional-national-health-surveys/AB71DE760C0027EDC5F5CF0AF507FD1B

Telegraph, (2015). *Mental health of pupils a 'top concern' for head teachers.* Retrieved Feb.18 2020, from: https://www.telegraph.co.uk/education/educationnews/11751377/Mental-health-of-pupils-a-top-concern-for-head-teachers.html

Emotional health and wellbeing in young people in 2019. SHEU

47% of boys and 29% of girls in Year 10 (aged 14-15y) have high self-esteem scores.

Pupils' self-esteem seems to decline through the school year (and recover over the Summer), while concerns about schoolwork and bullying rise over the year

More primary pupils score high for self-esteem than ever, but more Year 10 (14-15yo) girls score low now 10 years ago

Satisfaction with life declines as young people get older

Girls worry more than do boys

The source of support most often reported for most issues is family.

The most common worries for young people are school, and their appearance

The older females who are online the most report the poorest wellbeing, but that might not be cause and effect

Most pupils respond constructively to having worries or problems, but 6% of 14-15yo females report self-harm

Positive wellbeing measures are linked with each other; they are also linked with more positive lifestyle choices (although they haven't always been)

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Evaluating the effectiveness of a sexuality education teaching unit designed by teacher trainees: Effects on students and the importance of teacher training

The field of sexuality education makes use of many different "approaches, forms, pedagogies, and resources" (Ponzetti, 2009, p. 2). The term *comprehensive/holistic sexuality education* will be used for this paper, as it is defined as follows:

> Learning about the cognitive, emotional, social, interactive and physical aspects of sexuality. Sexuality education starts early in childhood and progresses through adolescence and adulthood. It aims at supporting and protecting sexual development. It gradually equips and empowers children and young people with information, skills and positive values to understand and enjoy their sexuality, have safe and fulfilling relationships and take responsibility for their own and other people's sexual health and well-being (WHO, 2010).

In this paper, we thus view sexuality education as being "as much about personal relationships as biological understanding" (Allerston & Davies, 2001, p. 5). Even though it might be similar to other subjects in some respects with regards to the transmission of knowledge and the development of personal autonomy, it is also about human relationships and thus includes the "private, intimate life of the learner" (Halstead & Reiss, 2003, p. 3). Sexuality education goes beyond the topic of human sexuality by "encouraging certain kinds of skills, attitudes, dispositions, behavior, and critical reflections on personal experience" (Hallstaed & Reiss, 2003, p. 7).

There is evidence for the effectiveness of comprehensive sexuality education in terms of promoting sexual health by "advocating sexual knowledge and understanding and reducing sexual risk behavior" (Kantor & Bacon, 2002, p. 39, Ponzetti, 2009, p. 9). Effective programs have the potential to reduce misinformation, increase accurate knowledge, clarify and strengthen positive attitudes and values, increase skills to make informed decisions and act upon them, improve perceptions about peer groups and social norms, as well as increase communication with parents and other trusted adults (Browne, 2015, p. 4, see also Kirby, 2008; Schuster, 1996). Learner-centered, interactive approaches have proven to be more effective in educational settings (Browne 2015, p. 2; Eisenberg, Bernat, Bearinger & Resnick, 2008; Haberland & Rogow, 2015).

Sexual confidence can be described as an "inner sexual awareness" (Penner & Penner 2005, p. 102) leading to knowing about own sexuality and needs. It has to be and can be learned: "knowledge, practice and positive sexual experience" (Penner & Penner, 2005, p. 101) lead to positive sexual confidence. The objective of sexuality education should be to build confidence and to teach students to respect themselves and others (Department of Education, 2000, p. 4). Students should be able to "develop confidence in talking, listening and thinking about sex and relationships" (Department of Education, 2000, p. 22).

Sexual communicative competence is based on expressive and receptive aspects (Metts, Sprecher & Regan, 1997, p. 366). These include being able to communicate own needs on the one hand and accept those of others on the other (Metts, Sprecher & Regan, 1997). Good communication skills build the basis for good relationships,

particularly sexual communication skills (Butler 2011, p. 12). Further, safe sex practices are fostered by communication (Weinstein, Walsh & Ward, 2008, p. 214). Similar to sexual confidence, sexual communication skills can be learned and develop with practice. Sexuality education classes provide an ideal framework to foster and practice sexual communication (Butler, 2011, p. 14).

Sexuality Education in Germany

Sexuality education has been integrated in German schools on the individual state level since 1968. The publication of the Pregnancy and Family Aid Act in the mid-1990s introduced nationally mandatory sex education programs, but federal states still remained responsible for the establishment and implementation of such programs (Beaumant & Maguire, 2013, p. 19). Nearly all federal states define what sex education should address in their Education Acts (National Foundation for Educational Research, 2009). Usually Sexuality Education is taught as a part of the biology curricula. Despite individual differences on the state level in terms of topics covered, generally sexuality education in Germany is intended to empower youth to make responsible decisions and to individually determine their lifestyle and sexuality (BZgA, 2018a, p. 19).

Thus, Germany approaches sexuality in a holistic way, including "emotions, relationships and ethics" apart from "biological and medical views" (Beaumant & Maguire, 2013, p. 19). The country follows the notion of emancipatory sex education, meaning "a positive, non-repressive, and dialogue-based approach" (Berne & Hubermann, 1999, p. 43). However, oftentimes the focus of sexuality education is school is mainly set on biological aspects of the subject, such as sexual organs, period, STDs, contraception, pregnancy, and birth (Vitzthum, 2014)[1].

High quality, comprehensive sexuality education has become increasingly important considering the recent technical and social developments in our globalized world (European Expert Group on Sexuality Education, 2015 p. 429). Informal sexuality education, e.g. through friends (Bleakley *et al.*, 2009; Secor-Turner *et al.*, 2011 or family members (Bleakley *et al.*, 2009; Fuxman *et al.*, 2013). Well-trained teachers with personal as well as professional skills are needed for the successful implementation of this type of sexuality education (UNESCO, 2016). However, little or no training does exist for pre-service teachers (Ollis *et al.*, 2013, p. 1) and teachers have long been feeling inadequately prepared for teaching sexuality education (Wight & Buston, 2003, p. 522).

Due to the importance of good-quality sexuality education, the present study evaluated a teaching unit conceptualized and carried out by teacher trainees at a local school.[2] In order to determine the unit's success, the school students' knowledge gain as well as developments in sexual communicative competence and sexual confidence were evaluated. Additionally, the students' (informal) sources of information were evaluated.

A small sample of university students in teacher training was also asked about how adequately they felt prepared for teaching sexuality education in school, since teachers play a crucial role in effective sexuality education (in schools).

Method

Participants

For the school setting, participants of the study attended two parallel classes at a German secondary school, with 29 and 30 school students respectively (n total= 59). A total of 27 girls and 32 boys took part in the study. They were aged between 11 and 13. For evaluating the teacher training at the university level, a total of 17 students took part in the study. They were all enrolled in a particular seminar as a part of their training as future biology teachers.

Instrument

For investigating the school students' sexual communicative competence, their sexual confidence, as well as their knowledge with regards to sexuality, questionnaires were used. The first and the second were based on a study by the BZgA (Bundeszentrale für gesundheitliche Aufklärung, Federal Center for Health Education) (for further information see Appel & Kleiber, 1998). The questionnaire for sexual communicative competence was composed of eight items which had to be rated on a six-step

1. For a comprehensive overview, also within Europe, see e.g. BZgA, (2018b).
2. For more information concerning the unit, see Wegner, Seide & Zehne, (2016).

Likert scale ranging from 0 (not difficult at all) to 5 (very difficult). The questionnaire evaluating students' sexual confidence consisted of eight items as well, which had to be rated on a five-step Likert scale with 1 (fully disagree) to 5 (fully agree). The knowledge test used in the study was mainly composed of multiple-choice questions or labeling tasks which were related to the topics discussed over the course of the teaching unit. There was one question on the test for each topic discussed. Table 1 (below) gives an overview of the scores for Cronbach's α with regards to the individual instruments' reliability at individual test dates.

Table 1. Scores for Cronbach's α for individual questionnaires used at pre- and post-test dates

Instrument	α pre	α post
Sexual communicative competence	0.842	0.823
Sexual confidence	0.556	0.535
Knowledge test	0.397	0.358

For evaluating students' (informal) sources of information with regards to sexuality, two multiple choice questionnaires with seven options to choose from (mother, father, siblings, friends, teachers, doctors, nobody plus the internet/books for sources of information) were used. It was assumed that there is a difference between trusted persons and plain sources of factual information when it comes to sexuality. It was possible to give multiple answers for the questions in both questionnaires

The questionnaire used for evaluating the university students' sexual confidence was an adapted version of the one used for the school students. University students could choose answers from a six-step Likert scale ranging from "very insecure" to "very secure". Additionally, students had to state whether they received training at the university level or elsewhere and whether they wished for more training at the university.

Procedure

One part of the study was conducted in the context of a teaching unit which consisted of five 60-minute lessons and lasted four weeks. The participants' sexual communicative competence, their sexual confidence, and their knowledge gain with regards to sexuality was examined in a pre- and post- test design which was applied in the two parallel classes. The teacher trainees at the university level were asked about their sexual confidence once in a biology seminar which was part of their university studies.

The statistical analysis of data for sexual communicative competence and sexual confidence included the median, maxima and minima. Apart from that, differences in means before and after the unit were tested for significance with the t-test for dependent samples. For the knowledge test, differences in means of scored points were tested for significance as well. In addition to actual points scored on the test, students had to assess their individually perceived knowledge gain. Results of their evaluation and actual means scored were correlated. A one-way repeated measures ANOVA was used for examining developments in sexual communication and confidence and development of knowledge for both sexes.

Results

Table 2 (page 23), gives an overview of overall results with regards to individual dimensions and differences between female and male school students. Results for individual scales will be presented separately.

The school students' overall mean score for *sexual communicative competence* at the pre-test was 2.12. The mean value increased to 2.63 at the post-test date with the differences in means of pre- and post-tests being significant (values of the scale ranged from 0 not difficult at all to 5 very

difficult). Looking at both sexes individually, female students scored a mean of 1.90 on the pre-test, where the male students scored 0.39 points higher (table 2). On the post-test, both sexes scored the same mean for sexual communicative competence (2.63), however, none of the results were significant (table 2).

Table 2. Overall means and standard deviations (SD) for sexual communicative competence, sexual confidence, and knowledge at pre- and post-test dates as well as results of the t-test for dependent samples (n=51).

	Pre (SD)	Post (SD)	T-Test for dependent samples
sexual communicative competence	2.12 (1.04)	2.63 (0.94)	T = -2.678 , p = 0.010*
sexual confidence	2.11 (0.57)	2.35 (0.57)	T = -2.216, p = 0.031*
knowledge	3.41 (1.89)	5.90 (2.00)	T = -7.478 , p = 0.000**
self-evaluation knowledge	3.04 (1,20)	4.03 (0,72)	T = -5.101 , p = 0.000**

Notes: *p < .05. **p < .01

For *sexual confidence*, students scored an overall mean of 2.11 on the pre-test (with values of the scale ranging from 1 fully disagree to 5 fully agree) Means improved by 0.24 for the post-test with differences in means being significant. Looking at means for female students, they scored the same as for sexual communicative competence on the pre-test. In the post-test, their score was 2.22. For male students, the mean of the pre-test was 2.29. Their mean score for the post-test was slightly higher (2.45) than the one of the female students. Significant differences in mean scores between male and female students could only be found for the pre-test.

Taking a look at the *knowledge test's* results, overall means were 3.41 on the pre-test. Means improved by 2.49 at the post-test (see table 2) with the difference in results being highly significant. Students' overall self-evaluation improved by 0.99, from 3.04 to 4.03, at the post-test. Female students scored a mean of 2.98 on the pre-test while male students reached a mean of 3.77. Female students improved their means on the post-test by 3.02 and scored higher means compared to males (table 2). However, differences in means between the two sexes were not significant at pre- or post-test dates. For students' self-evaluation, means increased by 0.9 at the post-test (see table 2). With a self-assessed score of 4.03, students evaluated themselves worse than they scored on the actual knowledge test.

Figure 1 (page 24), displays the results for the people school students go to when seeking advice. Looking at the total number of people mentioned, friends were the most important, sources of information, followed by the students' mothers with 36 mentions. Their fathers were mentioned less than half as much (figure 1). Almost 12% did not ask anybody for advice with regards to sexuality. None of the students stated that they would talk to their teachers when it comes to these kinds of topics (figure 1). Particularly for girls their friends were the most common people to talk to (over 50%), the same applied for the boys. Where more than 40% of the girls mentioned their mother as the second most important source of information, both parents were nearly equally important for the boys. Unlike boys, the girls also mentioned doctors as people they would talk to. Nearly 10% of the boys stated that they did not have anyone to talk to.

As for the overall answers for sources of information, the students' friends were the most important, with nearly 70% of mentions, followed by their teachers and the internet/books (47% and 45% respectively, figure 2, page 24). Putting the focus on family members, mothers were mentioned with 16 votes. None of the participants would ask a doctor for information. For female and male students separately, the results were slightly different. Only one female student stated she would use her father as a source of information, whereas boys asked them more often than their mothers. Boys also mentioned teachers twice as much (figure 2).

Figure 1. Percentages for school students' sources of information (total n=51)

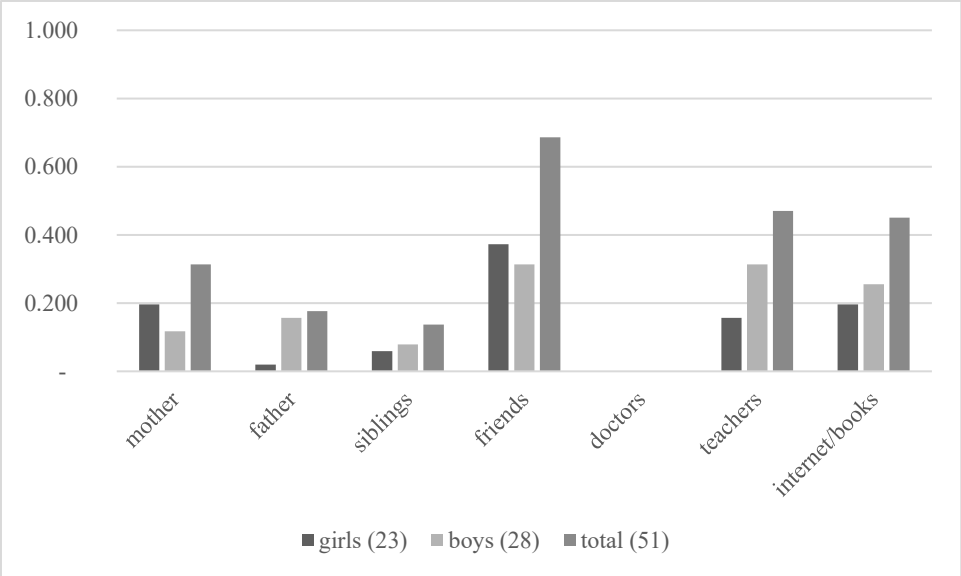
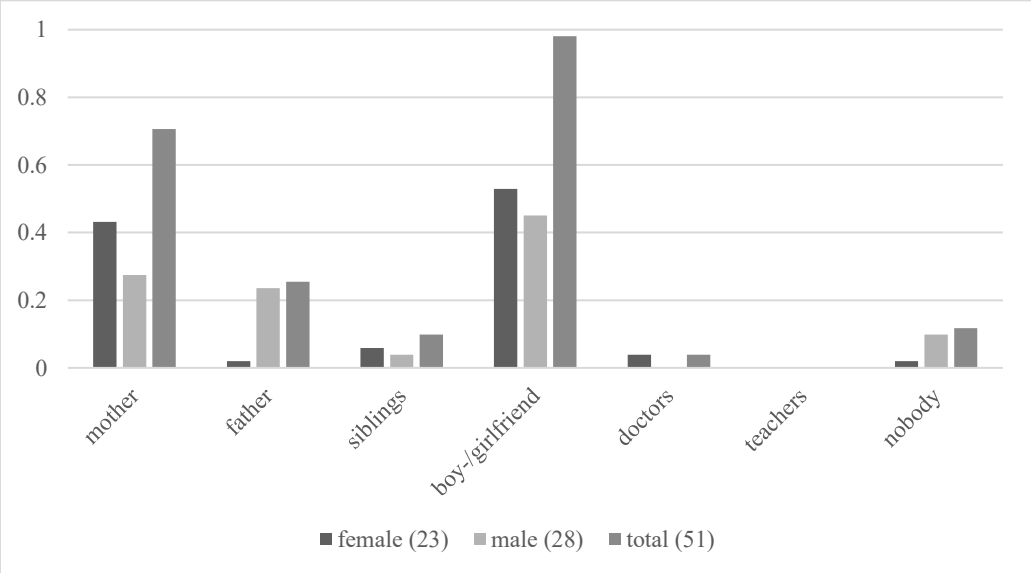


Figure 2. Percentages for persons school students talk to when seeking advice regarding sexual topics (total n=51)



Results for the university students showed that the majority of students have not had any university training with regards to sexuality education. More than 40% used offers other than those at the university to receive training and 70% wished for more training at the university level.

Discussion

Recalling our assumption that the teaching unit would improve school students' sexual communicative competence, their sexual confidence, and knowledge, it can be noted that these expectations held true, as the overall increase in means of the students' sexual communicative competence, sexual confidence, and knowledge gain were significant having compared pre- and post-tests. Comparing scores of both sexes showed that there were no significant differences except for differences in means of sexual confidence at the pre-test, which revealed that males were significantly more confident prior to the teaching unit. The unit's holistic and learner-centered approach can thus be related to the significant increase in the aspects investigated. This in turn speaks for the effectiveness of such holistic, learner-centered,

active approaches to sexuality education, which is also mentioned in several meta-analyses which compared the effectiveness of this kind of approach to other approaches (mainly abstinence-only programs).

Even though students did not view their teachers as a person to talk to, they were the most important sources of information apart from the students' friends. This seems especially relevant in connection to the results of the questionnaire conducted at the university level. Many students stated that they did not have courses dealing with sexuality education over the course of their teacher training at university and expressed the desire to receive more training when it comes to this topic. The adequate training of future teachers is an important aspect to consider when dealing with effective sexuality education, as they play an important role in providing information for students.

Despite the fact that the study yielded interesting results, the small sample size has to be kept in mind, particularly when it comes to the university students, which accounted for low Cronbach's α values. In addition to that, the students' personal background/ experience was not evaluated in the context of the study. However, these variables could have had an impact on the results.

Despite the small sample size, the study could relate the effectiveness of the type of sexuality education applied to the significant increases in students' sexual confidence, communicative competence, and their knowledge. This hints at the value of this type of instruction and is in line with other research findings on effective sexuality education (e.g. Kirby, 2008; Schuster, 1996). It can also be noted that teachers and the school context seem to be an important factor with regards to the transmission of information about sexuality when looking at the results of the questionnaire distributed to students. This in turn underlines the importance of adequate teacher training, as teachers' competence is an important factor for the success of such programs (e.g. UNESCO, 2016). The study at hand, however, could give an insight into the fact that the sample of future teachers at university did not feel adequately prepared for teaching the subject due to a lack of university courses related to the issue. Future studies need to investigate this trend in more detail in addition to further evaluating the impact of such programs on the parameters addressed in this study. To ensure an adequate sexuality education, the focus should be put on the training of future teachers and on those teachers who are already confronted with the subject and have not yet received adequate training.

References

Allerston, S. & Davies, G. 2001, *Sex education*. Nelson Thornes, Cheltenham.

Appel, E. & Kleiber, D. 1998, 'Evaluation of a peer education program on love, sexuality and contraception'. In R Schwarzer (ed.), *Advances in health psychology research*, Berlin, Freie Universität.

Beaumont, K. & Maguire, M. 2013*, Policies for Sexuality Education in the European Union. Note by the Policy Department C- Citizens' Rights and Constitutional Affairs*. Retrieved March 16 2020, from: https://op.europa.eu/en/publication-detail/-/publication/17522867-38aa-4ec5-b5b4-711d96f7b900

Berne, L. & Huberman, B. 1999, *European Approaches to Adolescent Sexual Behavior and Responsibility. Advocates for Youth*. Retrieved March 16 2020, from (pdf): http://www.advocatesforyouth.org/storage/advfy/documents/european.pdf

Bleakley, A., Hennessy, M., Fishbein, M. & Jordan, A. 2009, 'How sources of sexual information relate to adolescents' beliefs about sex'*, American Journal of Health Behavior*, vol. 33, no. 1, pp. 37-48.

Browne, E 2015, *Comprehensive Sexuality Education. Helpdesk Research Report by the Applied Knowledge Services – Governance, Social Development, Humanitarian, and Conflict*. Retrieved March 16 2020, from: https://gsdrc.org/publications/comprehensive-sexuality-education/

Butler, S 2011, '*Teaching communication in sex education: facilitating communication skills knowledge and ease of use'* PhD Thesis, College of Liberal Arts & Social Sciences Theses and Dissertations. Retrieved March 16 2020, from: http://via.library.depaul.edu/etd/90

Department for Education 2000, *Sex and Relationship Education Guide*. Retrieved March 16 2020, from: https://www.pshe-association.org.uk/curriculum-and-resources/resources/sex-and-relationships-education-guidance-dfe-2000

Eisenberg, ME., Bernat, DH., Bearinger, LH. & Resnick, MD. 2008, 'Support for comprehensive sexuality education: perspectives from parents of school-age youth', *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, vol. 42, no. 4, pp. 352–359. https://doi.org/10.1016/j.jadohealth.2007.09.019#

European Expert Group on Sexuality Education. 2015, 'Sexuality education – what is it?', *Sex Education*, vol. 16, no. 4, pp. 427–431. https://doi.org/10.1080/14681811.2015.1100599

Federal Centre for Health Education (BZgA). 2018a, *Sexuality Education: Lessons Learned and Future Developments in the WHO European Region*. Retrieved March 16 2020, from: https://www.bzga-whocc.de/fileadmin/user_upload/Dokumente/BZgA_Conference_Report_Online_fin.pdf

Federal Centre for Health Education (BZgA). 2018b, *Sexuality Education in Europe and Central Asia: State of the Art and Recent Developments - An Overview of 25 Countries*. Retrieved March 16 2020, from: https://www.bzga-whocc.de/en/publications/report-on-sexuality-education-in-europe-and-central-asia/

Fuxman, S., Finkelstein, D., De Los Santos, S. & O'Donnell, L. 2013, 'Sources of information on sex and antecedents of early sexual initiation among urban Latino youth', *American Journal of Sexuality Education,* vol. 10, no. 4, pp. 333-350. DOI 10.1080/15546128.2015.1069231.

Haberland, N. & Rogow, D. 2015, 'Sexuality education: emerging trends in evidence and practice', *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, vol. 56, no. 1, pp. 5-21.

Halstead, JM. & Reiss, MJ. 2003, *Values in Sex Education- from principles to practice*. Routledge Falmer, London.

Kantor, LM. & Bacon, WF. 2002, 'Abstinence- only programs implemented under welfare reform are incompatible with research on effective sexuality education', *Journal of the American Medical Women's Association*, vol. 57, no 1, pp. 38-40.

Kirby, D. 2008, 'The impact of abstinence and comprehensive sex and STD/HIV education programs on adolescent sexual behavior', *Sexuality Research & Social Policy*, vol. 5, no. 3, pp. 18-27.

Metts, S., Sprecher, S. & Regan, PC. 1997, 'Communication and sexual desire', in PA Andersen & LK Guerrero (eds), *Handbook of communication and emotion: research, theory, applications, and contexts* (354-380). Academic Press, San Diego.

National Foundation for Educational Research. (2009). *Sex and relationships education in other countries*. International Information Unit, NFER, Berkshire.

Ollis, D., Harrison, L. & Maharaj, C. 2013, *Sex Education matters- preparing pre-service teachers to teach sexuality education*. Deakin University, Burwood.

Penner, C. & Penner, JJ. 2005, *Sex 101*. W Publishing Group, Nashville.

Ponzetti, JJ. 2015, 'Sexuality Education: yesterday, today, and tomorrow', in JJ Ponzetti (ed.), *Evidence-based approaches to Sexuality Education: a global perspective* (1-16). Routledge, New York.

Schuster, M., Bell, RM., Berry, SH. & Kanouse, DE. 1996, 'Impact of a high school condom availability program on sexual attitudes and behaviors', *Family Planning Perspectives*, vol. 30, no. 2, pp. 67-72.

Secor-Turner, M., Sieving, RE., Eisenberg, ME. & Skay, C. 2011, 'Associations between sexually experienced adolescents' sources of information about sex and sexual risk outcome', *Sex Education: Sexuality, Society and Learning*, vol. 11, no. 4, pp. 489-500.

United Nations Educational, Scientific and Cultural Organization. 2016, *Teacher Training- a key to scaling up good quality of Comprehensive Sexuality Education*. Retrieved from http://www.unesco.org/new/en/hiv-and-aids/our-priorities-in-hiv/sexuality- education/teacher-training/

Vitzthum, T. 2014, '*Sexualkunde- die Grenzen der Aufklärung*' [Sexuality Education- the limits]. Die Welt. Retrieved from http://www.welt.de/.

Wegner, C., Seide, C.& Zehne, C. 2016, 'Sexuality Education in Germany – example of a comprehensive, learner-centered teaching unit', *Education and Health*, vol. 34, no. 3, pp. 79-83.

Weinstein, RB., Walsh, JL. & Ward, LM. 2008, 'Testing a new measure of sexual health knowledge and Ist connections to students' Sex Education, communication, confidence, and condom use', International Journal of Sexual Health, vol. 20, no. 3, pp. 212-221.

Wight, D. & Buston, K. 2003, 'Meeting needs but not changing goals: evaluation of in-service teacher training for sex education', *Oxford Review of Education*, vol. 29, no. 4, pp- 521-543.

WHO Regional Office for Europe and BZgA. 2010, *Standards for Sexuality Education in Europe: A Framework for Policy Makers, Education and Health Authorities and Specialists*. BZgA, Cologne.