The University Of Sheffield.

NIHR PUBLIC HEALTH REVIEW TEAM

EVIDENCE REVIEW OF THE FACTORS THAT INFLUENCE MENTAL HEALTH OF UNIVERSITY AND COLLEGE STUDENTS IN THE UK: PROTOCOL

School for Health and Related Research

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Summary

- This work has been commissioned to provide an independent review of existing research to establish what is known, what gaps exist in the evidence base, and to provide national and local policy makers with the best available evidence to identify policies and interventions which will best prevent and reduce poor mental health amongst tertiary level students in the UK.
- The aim is to develop an evidence informed framework that identifies the causes of poor mental health, and factors that promote mental wellbeing amongst students in tertiary level education.
- The first stage will involve developing a conceptual framework informed by a lifecourse approach and stakeholder consultation. The framework will inform the data extraction process, and will be modified and annotated with the results of the evidence synthesis. As well as illustrating where the evidence exists, it will be used to identify and clarify any gaps in the evidence.
- A mixed methods review incorporating a synthesis of qualitative, survey and observational data identifying the factors that influence student mental well-being. For those commissioning services to plan and deliver an appropriate and effective response to student needs requires an evidence based understanding of the causal mechanisms of poor mental health amongst students.
- In consultation with the stakeholders, the review and accompanying conceptual framework will form the basis for evidence-based recommendations for policy, service development and future research.
- The final report and all associated outputs will be delivered by the end of December 2020

Background

Poor mental health of further and higher education students is a growing public policy concern (Association of Colleges, 2017; Brown, 2018). According to a review of 105 FE colleges in England, 85% of colleges reported an increase in mental health difficulties over a three-year period (Association of Colleges, 2017). More specifically, all colleges reported students experiencing depression and 99% of colleges reported students experiencing severe anxiety with these also being the most prevalent mental health problems among university students (Bayram

& Bilgel, 2008; Pereira et al., 2019). These common mental health difficulties are associated with a number of negative outcomes such as academic underperformance and increased risk of dropping out of university (Eisenberg et al., 2009; Hysenbegasi et al., 2005; Unite, 2016). It is common for mental health problems to arise whilst students are acclimatising to their new environment as they face a unique set of stressors such as forming new friendships, managing money and perhaps living away from home for the first time and adjusting to independent learning. Indeed, a UK cohort study found that levels of psychological distress increase on entering university (Bewick et al., 2010), and recent evidence suggests that the prevalence of mental health problems, including self-harm and suicide, among university students is increasing (Sivertson et al., 2019; Storrie et al., 2010).

Services offered within FEIs and HEIs typically include either individual or group counselling. According to an online survey of UK student counselling services, there was an increase in demand for support services over a three-year period in further education sectors (Broglia et al., 2018). This increased demand is set within a context of a reduction in government funding which has led to closures of student counselling services in FE (Caleb, 2014). Similarly, there has been an increase in the number of students seeking support from university counselling services (Thorley, 2017). Ninety-four percent of Higher Education Institutions (HEIs) reported an increase in demand for their counselling services over the past five years (Thorley, 2017). Despite this increase, the capacity of professional services to offer 1 to 1 support to large numbers of students is limited (Brown, 2018), and there are currently long waiting lists (Gallagher, 2014).

Although requests for professional support have increased substantially (Williams et al., 2015), only a third of HEI students with mental health problems seek support from counselling services in the UK (Macaskill, 2012). Many students do not seek help due to barriers such as stigma or lack of awareness of services (Hunt & Eisenberg, 2010). Without formal support or intervention, there is a risk of deterioration. As a substantial proportion of students do not seek formal help (Macaskill, 2012), and given the increase in mental health problems among students (Association of colleges, 2017; Storrie et al., 2010), FEIs and HEIs have recognised the need to move beyond traditional forms of support and provide alternative, more accessible interventions aimed at improving mental health and well-being. Indeed, such institutions present a unique opportunity to identify, prevent, and treat mental health problems because they support multiple aspects of students' lives including academic studies, pastoral and counselling services, and residential accommodation.

It is, therefore, important for further education institutions (FEIs) and HEIs to offer accessible and effective interventions for their students. Worsley et al (2019) conducted an overview of existing

reviews. They identified 24 reviews published between 1999-2019. Their review focused on reviews of interventions. They identified 11 intervention types that had been reviewed for student mental health and well-being, including mindfulness-based interventions, technology-delivered interventions, cognitive behavioural interventions, psychoeducation interventions, recreation programmes, relaxation interventions, educational/personalised mail feedback interventions, acceptance and commitment training interventions, setting-based interventions, suicide-prevention interventions, and the Tomatis method. Worsley et al (2019) identified the lack of data to inform which individuals' best respond to which treatment formats. Existing reviews did not consider the distribution of inequalities within or across population subgroups including by socio-economic status, ethnicity, age, gender, disability and sexuality. Nor did they explore the individual differences and differential impact so interventions are more tailored to suit particular student characteristics leading to more suitable and effective interventions. They also highlighted the need to review the wider social determinants of student health and well-being – for example, the living environment including physical surroundings and social spaces environment, quality and accessibility of accommodation and social relationships.

In consultation with our stakeholders, we are suggesting the need to prioritise exploring further the wider social determinants of student health and well-being. Prevention and appropriate targeting of interventions at those most at risk depends upon an understanding of how individual, environmental, social and economic factors might contribute to wellbeing and also poor mental health amongst students.

Aim and objectives

The overall aim of this review is to identify, appraise and synthesise existing research evidence that explores the aetiology of poor mental health and mental wellbeing amongst students in tertiary level education. We will aim to gain a better understanding of the mechanisms that lead to poor mental health amongst tertiary level students and, in so doing, make evidence based recommendations for policy, practice and future research priorities.

Specific objectives in line with the project brief will be:

- To co-produce with stakeholders a conceptual framework for exploring the factors associated with poorer mental health in students in tertiary settings. The factors may be both predictive, identifying students at risk, or causal, explaining why they are at risk. They may also be protective, promoting mental wellbeing. The initial framework will be informed by Life Course Approach (Fine & Kotelchuck 2010) (see Appendices 1 and 2)

- To conduct review drawing on qualitative studies, observational studies and surveys to explore the aetiology of poor mental health in students in university and college settings and identify factors which promote mental wellbeing amongst students.
- To identify evidence based recommendations for policy, service provision and future research that focus on prevention and early identification of poor mental health.

Risk of bias and conflicts of interests: To ensure that the review is informed by, and useful to, all stakeholders who have an interest in the evidence base for student mental health we will need to include evidence from diverse stakeholders.

The team will consult on priorities and current service provision and research in this field, with external stakeholders including Student Minds (largest charity focused on student mental health), AMOSSHE (Student Services Organisation which represents service providers in higher education) and SMaRTeN (national research network funded by UKRI focusing on student mental health in higher education). We will ask individuals who participate directly in the review process to declare their interests and we will highlight the source of evidence where there is the possibility of a significant risk of bias.

Formal conflicts of interest and personal perspectives of the reviewers will also be stated, particularly given that the focus of the review sits within the reviewers' direct work context.

Project plan

We are proposing to undertake the review in two stages.

1) We will construct a conceptual framework of the factors that impact on mental health and wellbeing along a continuum that begins before tertiary education begins, at transition and during the time in tertiary education. A Life Course Approach (Fine & Kotelchuck 2010) will inform the framework. The framework will be used in the following ways during the review process:
    - A tool to guide and inform consultations with our PPI group and stakeholders
    - A framework to inform the development of data extraction and evidence synthesis
    - An outline onto which to map evidence from the evidence synthesis
    - A visual representation of the review findings to indicate both where evidence exists, the strength of that evidence and where evidence gaps exists.

    We anticipate the conceptual framework will be developed and refined during the review process. (See Appendix 2)

2) During the second stage, we will undertake a mixed methods systematic review, drawing upon qualitative studies, observational studies and surveys that have identified factors influencing mental health and wellbeing for students in tertiary level education. The review scope will initially be limited to studies undertaken in the UK, but expanded to research from high income settings depending on the quantity and quality of evidence identified.

Proposed outputs: The framework and associated evidence synthesis will be shared with national policy makers, local government representatives (officers and councillors), and student bodies to

- Report for the NIHR PHR programme (subsequent publication in the NIHR Journal Library)
- Peer-reviewed journal article
- Evidence briefing for decision-makers
- Summary materials for public audiences

Proposed methodological approach

Addressing inequalities in student mental health

We will use the PROGRESS-Plus dimensions as a guide to ensure that the review considers all relevant dimensions of inequalities which intervention strategies would need to consider. These will be embedded in the conceptual framework, and allow gaps in evidence to be highlighted. The PROGRESS factors will serve as a guide and will be modified for relevance to this review, for example instead of the student's occupation, we will consider parental occupation. For example, young people whose parents have not attended tertiary level education themselves may feel more unprepared and isolated than those from backgrounds where attendance at tertiary level education is familiar and well understood.

Stakeholder involvement

We will elicit input from our Public Health PPI Panel and advisors listed above during all stages of the review. In particular we will seek guidance in regard to identifying key factors that influence student mental health and informing the conceptual framework, identifying evidence (particularly in the form of grey literature), interpreting the evidence synthesis and developing the framework and other outputs. We propose to use diverse consultation and co-production methods and will identify appropriately tailored strategies to engage groups and individuals affected by interventions that will promote student wellbeing. We will seek their assistance in regard to Plain English wording and presentation of outputs and their involvement in the production of materials.

Literature search and screening

There will be two search iterations to identify relevant evidence for the review. The first iteration, (database search) will search multiple databases. The search will comprise subject headings and free-text terms and will be developed on MEDLINE then adapted for the other databases.

We will search the following databases:

- MEDLINE
- EMBASE
- Web of Science (Science Citation Index and Social Science Citation Index)
- Applied Social Sciences Index and Abstracts (ASSIA)
- International Bibliography of Social Sciences (IBSS)
- PsycINFO

The initial search will be restricted to papers in English and from 2012-current. UK studies will be flagged and be considered most relevant. Depending on the quantity and quality of this literature a further decision will be made on whether to extend the review to include studies conducted in other developed world contexts.

The second search iteration will include the following search methods:

- Scrutiny of reference lists
- Search of mental health charity websites
- Scrutiny of recent policy documents for relevant, peer reviewed evidence.
- Citation searching of included and highly relevant evidence
- Web search for any relevant UK grey literature

Search results will be downloaded to a reference management system (EndNote) and screened against the inclusion criteria by one reviewer, with a 10% sample screened by a second reviewer. Uncertainties will be resolved by discussion among the review team.

Identification of relevant evidence

PICOS

Population: Depending on topic the scope may include a variety of further education settings (16 yrs+ or 18 yrs+, potentially including mature students, international students, distance learning students, students at specific transition points).

Context

University and Colleges, the focus of the review will be on the UK but where relevant to understanding and creating the conceptual map of factors that influence students' wellbeing, we may draw on literature from high income countries. We will also be interested in the context prior to the beginning of tertiary education, including factors during transition from home and secondary education or existing employment to tertiary education.

Outcomes

Any factor that has been shown to be associated with mental health of students in tertiary level education. This includes clinical indicators such as diagnosis and treatment and/or referral for depression and anxiety. Self-reported measures of wellbeing, happiness, stress, anxiety and depression. We will not include measures of academic achievement or engagement with learning as indicators of mental wellbeing.

Studies

We will include qualitative studies, observational studies, surveys to inform our understanding of how students, peers, families and professionals experience of student mental wellbeing and the factors that influence mental health of students in tertiary education settings.

Data extraction and quality appraisal

We will extract and tabulate key data from the included papers. Data extraction will be performed by one reviewer, with a 10% sample checked for accuracy and consistency. For qualitative papers we will extract data from both the authors' findings and from raw data within the published paper. The data extraction forms for each type of study design (qualitative, observational and survey) will be designed using the framework of themes arising from the conceptual model. Quality (risk of bias) assessment will be undertaken using appropriate tools for the types of study designs included. Quality assessment will be performed by one reviewer, with a 10% sample checked for accuracy and consistency.

Methods of synthesis

We will provide a narrative synthesis structured around the conceptual framework. The conceptual framework for the synthesis. Additional forms of analysis and synthesis will depend on the characteristics of the evidence identified. We will seek to characterise key features of the literature including strengths, limitations and gaps. Assessment of the overall quality and relevance of evidence will form part of the narrative synthesis. We will describe the volume, quality and degree of consistency in the evidence, and where there are gaps requiring future primary research.

Registration and outputs

We will make the protocol available via the PHR programme website, our own website and PROSPERO.

Proposed outputs:

- Report for the NIHR PHR programme (subsequent publication in the NIHR Journal Library)
- Peer-reviewed journal article(s)
- Evidence briefing for decision-makers
- Summary materials for public audiences

Appendix 2 provides a Gantt chart for the review stages and milestones

Appendix 1

Summary of proposed theories to inform the conceptual framework

Life course theory (LCT)

Key Concepts Life course theory (LCT) is a conceptual framework that helps explain health and disease patterns – particularly health disparities – across populations and over time. Instead of focusing on differences in health patterns one disease or condition at a time, LCT points to broad social, economic and environmental factors as underlying causes of persistent inequalities in health for a wide range of diseases and conditions across population groups. LCT is population focused, and firmly rooted in social determinants and social equity models. Though not often explicitly stated, LCT is also community (or "place") focused, since social, economic and environmental patterns are closely linked to community and neighbourhood settings. 3 While LCT has developed in large part from efforts to better understand and address disparities in health and disease patterns, it is also applied more universally to understand factors that can help everyone attain optimal health and developmental trajectories over a lifetime and across generations. For the field of Maternal and Child Health, LCT addresses two separate but related questions:

- Why do health disparities persist across population groups, even in instances where there has been significant improvement in incidence, prevalence and mortality rates for a specific disease or condition across all groups?
- What are the factors that influence the capacity of individuals or populations to reach their full potential for health and well-being?

Based on growing and converging scientific evidence from reproductive health sciences, developmental and neurosciences, and chronic disease research, LCT offers several key concepts to address these two fundamental questions:

- Pathways or Trajectories – Health pathways or trajectories are built – or diminished – over the lifespan. While individual trajectories vary, patterns can be predicted for populations and communities based on social, economic and environmental exposures and experiences. A life course does not reflect a series of discrete steps, but rather an integrated continuum of exposures, experiences and interactions.
- Early Programming – Early experiences can "program" an individual's future health and development. This includes prenatal programming (i.e. exposure in utero), as well as intergenerational programming (i.e., the health of the mother prior to conception) that

impact the health of the baby and developing child. Adverse programming can either result directly in a disease or condition, or make an individual more vulnerable or susceptible to developing a disease or condition in the future.

• Critical or Sensitive Periods – While adverse events and exposures can have an impact at any point in a person's life course, the impact is greatest at specific critical or sensitive periods of development (e.g. early childhood, during adolescence, etc.).

• Cumulative Impact – Cumulative experiences can also "program" an individual's future health and development. While individual episodes of stress may have minimal impact in an otherwise positive trajectory, the cumulative impact of multiple stresses over time may have a profound direct impact on health and development, as well as an indirect impact via associated behavioural or health service seeking changes. (This concept of cumulative impact is also referred to as "weathering"or "allostatic load".)

• Risk and Protective Factors – Throughout the lifespan, protective factors improve health and contribute to healthy development, while risk factors diminish health and make it more difficult to reach full developmental potential. Thus, pathways are changeable. Further, risk and protective factors are not limited to individual behavioural patterns or receipt of medical care and social services, but also include factors related to family, neighbourhood, community, and social policy. Examples of protective factors include, among others: a nurturing family, a safe neighbourhood, strong and positive relationships, economic security, access to quality primary 4 care and other health services, and access to high quality schools and early care and education. Examples of risk factors include, among others: food insecurity, homelessness, living in poverty, unsafe neighbourhoods, domestic violence, environmental pollution, inadequate education opportunities, racial discrimination, being born low birthweight, and lack of access to quality health services. Stated more simply, key life course concepts can be summarized as follows:

• Today's experiences and exposures influence tomorrow's health. (Timeline)

• Health trajectories are particularly affected during critical or sensitive periods. (Timing)

• The broader community environment–biologic, physical, and social –strongly affects the capacity to be healthy. (Environment)

• While genetic make-up offers both protective and risk factors for disease conditions, inequality in health reflects more than genetics and personal choice. (Equity) These four key concepts – reflecting timeline, timing, environment, and equity – are fundamental to understanding and applying LCT.

Inadequate education opportunities, racial discrimination, being born low birthweight, and lack of access to quality health services. Stated more simply, key life course concepts can be summarised as follows:

• Today's experiences and exposures influence tomorrow's health. (Timeline) • Health trajectories are particularly affected during critical or sensitive periods. (Timing) • The broader community environment–biologic, physical, and social –strongly affects the capacity to be healthy. (Environment) • While genetic make-up offers both protective and risk factors for disease conditions, inequality in health reflects more than genetics and personal choice. (Equity)

These four key concepts – reflecting timeline, timing, environment, and equity – are fundamental to understanding and applying LCT

Life course approach

Adopting a life course approach, assets theories indicate that especially for young people to focus on health creation rather than disease prevention provides a better chance of sustaining any health gains made from early years interventions (Granger 2002; Lindstrom and Eriksson 2010). The more that people are provided with opportunities to gain from the positive effects of protective factors (health assets), the more likely they are to thrive in challenging conditions and less likely to engage in risk taking behaviours, thereby establishing a secure foundation for the future (Morgan 2010).

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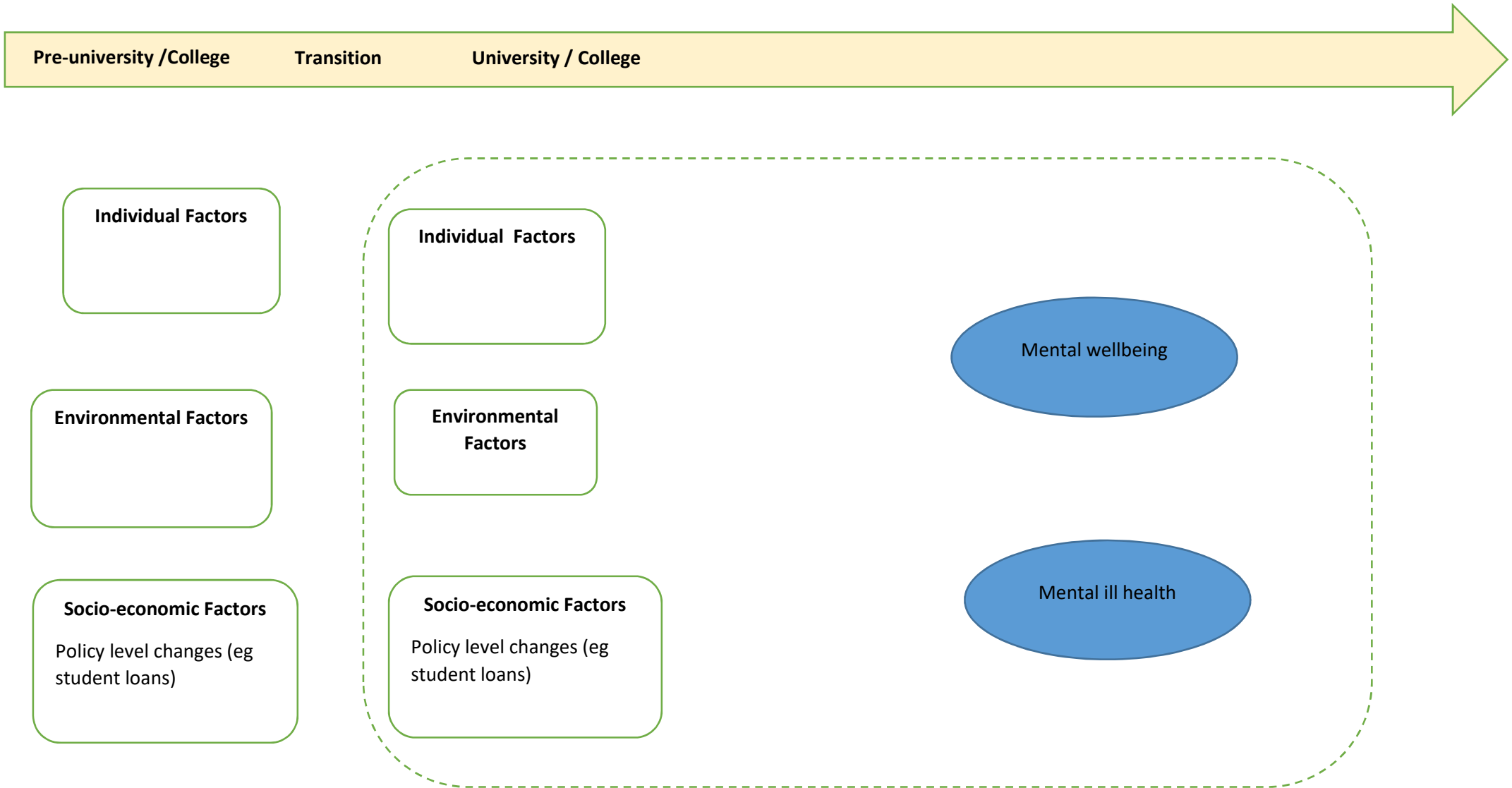
Appendix 2 – Framework for Conceptual Model –

Life course Influences on student mental wellbeing



Appendix 3: Gantt chart.

This sets out our proposed timeline for completion of the review. We will hold regular team meetings to monitor progress and will keep the PHR programme team informed of progress at regular intervals.

	June 20	July 20	Aug 20	Sept 20	Oct 20	Nov 20	Dec 20	Jan 20
Scoping and protocol development	x							
Evidence identification	x	x						
Data extraction/quality assessment		x	x					
Analysis and report writing			x					
Delivery of draft report				x				
Completion final report							x	
– co-production of framework with stakeholders								
Public consultations	x	x			x			
Conceptual framework development	x	x				x	x	
Production of guidance for research commissioners and policy makers								

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