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ORIGINAL RESEARCH

HEEADSSS Up: Evaluating the Efficacy of a Blank Proforma in the Use and Documentation of an Adolescent Psychosocial Risk Assessment Tool

Miriam Smyth[1], Órla Walsh[2]

[1]CHI @ Crumlin, Children's Health Ireland at Crumlin, Dublin, Ireland; [2]CHI @ Temple Street, Children's Health Ireland at Temple Street, Dublin, Ireland

Correspondence: Miriam Smyth, General Pediatric Department, CHI @ Crumlin, Cooley Road, Crumlin, Dublin, 3, Ireland, Tel +353857415871, Email miriam.smyth1@childrenshealthireland.ie

Background: Adolescence is typically seen as a "healthy" period in a person's life, free from illness. The World Health Organisation (WHO) estimates that 1.7 million adolescents die every year because of preventable causes such as suicide, injuries, and violence. The aim of this quality improvement initiative was to assess and improve the use and documentation of the psychosocial risk assessment tool; HEEADSSS, amongst non-consultant hospital doctors (NCHDs) in a paediatric tertiary centre emergency department (ED).

Methods: This was a mixed method quality improvement initiative carried out over three phases in paediatric tertiary centre ED. Educational interventions were implemented and their efficacy assessed.

Results: There was a 277% (n = 9 increased to n = 34) improvement in the use and documentation of HEEADSSS in the post intervention phase of the study. Participants who had undertaken the intervention were significantly more likely to have either a partially or fully completed HEEADSSS assessment compared to those who had not (odds ratio [OR] = 5.24, 95% confidence interval [CI]: 3.45–7.75, $p < 0.001$; n = 409). Additionally, the odds of having a fully completed HEEADSSSassessment were significantly higher among those who received the intervention (OR = 4.08, 95% CI: 1.90–8.75, $p < 0.001$; n = 409). Clinical presentations synonymous with psychosomatic illness, such as chest pain, abdominal pain and headaches were more likely to have a HEEADSSS done following the intervention phase.

Conclusion: The results demonstrate the efficacy of simple, accessible and education focused interventions. There is little documented in current literature about the efficacy of a proforma. In the field of adolescent medicine, there is a call for a multi-sectorial approach to be adapted, encompassing the educational, emotional, and financial needs of adolescents. Global health promotion strategies need to adjust to a prevention paradigm, focusing on the origin of adult mortality.

Keywords: adolescent medicine, psychosocial assessment tool, emergency department, adolescent ambulatory care

Introduction

Adolescence is the period of transition from childhood to adulthood. It is a unique period of growth that requires a unique approach by caregivers, teachers, and health-care providers. It represents a pivotal developmental stage characterised by rapid physical, emotional, and neurocognitive changes. This transitional period is frequently accompanied by an increase in risk-taking behaviours, emotional dysregulation, and emerging mental health concerns. Global health data highlight that the leading causes of adolescent morbidity and mortality—such as suicide, accidental injury, substance misuse, and interpersonal violence—are predominantly psychosocial in origin.[1] Despite this, such factors often remain under-recognized in high-acuity clinical environments, including emergency departments (EDs), which are frequently the primary point of healthcare contact for this population.[2] More importantly, adolescents who rely on the emergency department as their only source of ambulatory care are among the most vulnerable of the population.[3] Unfortunately, this is often an unrecognised fact by many clinicians and triaging health-care professionals. This study aims to bridge this gap by championing a more comprehensive and structured approach to adolescent ambulatory care. A psychosocial interview

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framework enables clinicians to assess all aspects of a young person's life, highlighting potential risky behaviours. This offers clinicians a unique perspective that facilitates a more holistic approach.

Advances in neuroscience have afforded us a new, more revealing lens to view adolescents with. This new perspective is particularly helpful in the context of the risky behaviours. An understanding of neurobiological mechanisms aides the development of more accurate and effective health policies and guidelines for adolescents.[4] The development of such preventative policies is of utmost importance given the burgeoning literature regarding the long-term physical and mental health implications of risk- taking behaviours in adolescence.[5]

Changes in grey and white matter distribution, as well as an increase in excitatory neurotransmitter activity are responsible for a lot of the behavioural patterns synonymous with adolescence. The prefrontal cortex is the epicentre of emotional regulation, decision-making and reflective thought. The complex nature of neurodevelopment means that changes in the prefrontal cortex do not occur until later in adolescence. Consequently, adolescent risk-taking behaviour originates from a complex neuroanatomical pruning process.[6]

An understanding of the causes of adolescent morbidity and mortality forms the cornerstone of effective health promotion strategies amongst this vulnerable cohort. A report from the Central Statistics Office (CSO) cited that outside of the neonatal period adolescence carries the highest rate of mortality and morbidity in childhood. The cause of death is likely due to external factors such as injury or poison than organic medically explained causes.[7] This finding correlates with the WHO report that accidents and unintentional injuries are the leading cause of adolescent morbidity and mortality across the globe. Additionally, the risk-taking behaviours alluded to previously, often involve episodic drinking and substance abuse. The relationship between substance abuse and associated injuries is well documented globally.[1]

The rate of mental health disorders among young people in Ireland is at an all-time high, with 1 in 3 reporting some type of mental disorder by 13 years. This increases to 1 in 2 by the age of 24 years.[8] Depressive disorders are the leading cause of adolescent morbidity amongst females aged 15–19 years. Anxiety disorders and behavioural problems are also overly represented in literature as a cause of ill health amongst teenagers.[9]

To effectively access adolescents and address their health-care needs we need to use tools designed especially for them. The HEEADSSS assessment (Home, Education/Employment, Eating, Activities, Drugs, Sexuality, Suicide/Depression, and Safety) is a structured psychosocial risk assessment tool specifically developed to facilitate comprehensive and developmentally appropriate history-taking in adolescents. It enables clinicians to systematically explore key domains of an adolescent's life while fostering rapport, trust, and patient-centred communication. The format is designed to prioritise protective factors and strengths before addressing more sensitive or high-risk behaviours, in line with resilience-focused and trauma-informed care principles.[10,11] Since its initial inception by Goldenring et al in 1988, it has been revised to reflect the evolution of modern society. The most recent version allows for up-dated causes of adolescent morbidity and mortality including disordered eating, and unintentional injury.[12] Its intended use is in everyday clinical environments, where a clinician leads a young person through a structured interview focused on specific facts about their psychosocial history. Routine use by clinicians helps identify those young people who are more at risk of certain behaviours and represents an opportunity for preventative counselling.

Evidence suggests that the implementation of structured psychosocial assessments such as HEEADSSS enhances the identification of modifiable risk factors and supports early intervention.[11,12] Furthermore, the tool serves as a practical mechanism to promote health literacy, facilitate appropriate referrals, and improve documentation consistency within multidisciplinary care settings. International guidelines, including those from the American Academy of Pediatrics (AAP) and the WHO, endorse routine psychosocial screening using validated tools like HEEADSSS for all adolescent presentations to EDs. Despite these recommendations, there remains a paucity of data on the routine use and documentation of HEEADSSS in EDs, particularly in the Irish context. Existing literature highlights variability in clinician confidence, time constraints, and systemic barriers as key obstacles to its widespread adoption.[12–14] As such, targeted quality improvement initiatives that prioritise visibility, accessibility, and education surrounding HEEADSSS may represent an effective strategy to embed this evidence-based tool into routine adolescent care pathways within paediatric teaching hospitals.

Psychosocial assessments are useful in identifying a young person's resilience. Shedding light on these protective factors to the young person can ensure this behaviour is sustained throughout adolescence and into adulthood. The benefits of the HEEADSSS assessment are endless. This formulated and focused discussion can have a lasting positive impact on a person's life.[10] Often clinicians are the only people able to occupy this health promotion space with a young person. It is important that all professional bodies involved with medical training and education appreciate this unique position and equip their trainees and staff appropriately.[13]

Existing Literature

There is no Irish data, and limited international data on the use and documentation of the HEEADSSS assessment. The reason behind this data gap is unclear. It is likely a combination of lack of education about the importance of a holistic approach to adolescent healthcare, as well as an underestimation of the impact clinicians can make during their brief ED consultation with young people. There is a paucity of training tools available to clinicians looking to upskill in the arena of adolescent medicine. This breeds a degree of reluctance to employ specific skills, such as taking a psychosocial history amongst doctors in training. Some studies have demonstrated the efficacy of an "aide memoire" in the ED setting. Additionally, most data available does not account for the revised version of the assessment tool, expanding to include eating habits and general safety.[12] Proforma based initiatives are cited as effective strategies to improve history taking and time management. One such study, based in Canada, showed the efficacy of patient chart stamp of the HEEADSSS acronym. Documentation of psychosocial elements of adolescent care rose from 1% to 9% in the intervention phase of this study.[14] A multi-centre Australian study looked at the efficacy of a digital proforma. Ultimately, concluding that a blank proforma is most effective when used in the context of a face-to-face interview.[15] Building on this work, in 2023 another Australian study group showed the staff and patient satisfaction with an electronic version of HEEADSSS.[13]

Methods

Study Design

This was a single centre, retrospective mixed method quality improvement initiative. This study was carried out in a tertiary, university affiliated teaching hospital in Ireland. Improving the quality of care offered to adolescent patients was its main objective. This was achieved using retrospective analysis of results obtained from chart reviews. Ethical approval was sought and granted through the Children's Health Ireland ethics department. This approval complies with the Declaration of Helsinki. All adolescent ED attendances to Children's Health Ireland (CHI) at Crumlin, during the months of April 2023 and June 2023 were examined. Using the plan-do-study-act (PDSA) approach, an attempt was made to initiate improvement practices amongst staff in the ED. This approach represented an effective, staff and patient centred way to initiate sustainable change. Given the nature of the data, a statistical method looking at categorical comparisons of proportions was most appropriate. As such, we used Odd's Ratio (OR) and Confidence Interval (CI) to present our results.

The study was done in three phases over a three-month period. The first phase was a retrospective review and analysis of current practices regarding the use and documentation of the HEEADSSS assessment amongst NCHDs in the ED. This initial review looked at all adolescent attendances to the ED in a month. The second phase involved implementing our interventions and was carried out over one month. The interventions included an education session, where a blank HEEADSSS proforma was introduced to staff. For the purposes of this study, the term "blank proforma" describes a document that was created as an "aide memoire" for staff using and documenting the HEEADSSS assessment. It detailed the various elements of HEEADSSS offering short prompts for each section. Beside each prompt was a blank space for staff to input their patient specific responses. In addition to the individual elements of HEEADSSS, it also prompted staff to document other clinical details including their grade, the time and date of the encounter and whether consent was obtained from both the parent/guardian and the young person. Lastly, there was a tick box sentence requesting the clinician to disclose if the encounter was done with the young person on their own or in the presence of a parent/guardian. It is well-recognised that an effective HEEADSSS assessment should be done with the young person on their own where appropriate.[16]

The education session was tailored to the specific needs of the staff group via an anonymous staff survey, distributed in advance, assessing their knowledge and comfort using HEEADSSS. A lanyard to be attached to staff I.D badges detailing the elements of HEEADSSS and examples of how to ask each question was distributed. Overall visibility and awareness of HEEADSSS was achieved through screen saver reminders on every desktop in the ED. Email reminders with educational resources attached were sent at the beginning and in the middle of the "intervention" month. The third, and final phase was completed one month after the implementation phase. This involved repeating the steps of phase one using "Symphony", an electronic medical record used in the ED where this study was based, and a predesigned data collection excel sheet.

Setting

The study took place between 7th April 2023 and 24th June 2023 in the ED of CHI at Crumlin. CHI at Crumlin is a tertiary, multi-university affiliated paediatric institution, and its ED is the largest paediatric ED in Ireland that sees an average of 1000 patients every week. It primarily serves a local population of approximately 7000 people, as well as taking referrals from all over the country.[17]

Participants

Using *Symphony*, an electronic patient medical record database used nationally in EDs, all adolescent attendances over the allotted time frame were identified. Data points included in this search included date of birth, date of presentation and presenting complaint. Further data points were gathered from the individual electronic chart review. These included; gender, time of presentation, whether a HEEADSSS assessment was documented and the relevant findings, overall clinical outcomes, and the presence of pre-existing medical and psychiatric conditions. All data points were stored on a password protected Microsoft *Excel*® spread sheet.

Analysis

The medical records were pseudo-anonymized, using a unique patient hospital identification number. The anonymized data was then inputted into a Microsoft *Excel*® spread sheet, which was designed to capture specific data points. The primary data points captured, and analysed, included each element of HEEADSSS listed separately, whether it was done with the young person on their own, the time of presentation to the ED, the presenting complaint and whether the assessment revealed any positive findings. Given the nature of the data, a statistical method looking at categorical comparisons of proportions was most appropriate. As such, we used OR and CI to present our results.

Results

The two searches on Symphony generated a total of 783 electronic medical records. In accordance with our inclusion and exclusion criteria, a total of 409 charts were suitable for analysis. In phase one, 210 charts were retrospectively analysed, compared with 199 charts in phase two.

There were 36 responses to the staff survey. While the majority (n = 33) were familiar with the HEEADSSS assessment, less than half (n = 14) said they routinely use it when seeing adolescent patients, citing lack of time and discomfort with broaching certain elements as the main reason for this. The most common barriers to using HEEADSSS cited, were personal discomfort, largely stemming from lack of knowledge and training, followed by concerns over time management, in the context of an already busy workload. Furthermore, they felt that dealing with the potential positive findings would be a heavy burden to carry, within an already resource limited and stretched environment.

The implementation of educational interventions led to a marked increase in the use and documentation of the HEEADSSS assessment among NCHDs in the ED. Full assessments increased from 7% (n = 9/210) pre-intervention to 34% (n = 34/199) post-intervention. The OR of either a partially completed or entirely completed HEEADSSS assessment by those who had undertaken the interventions versus those who had not was 5.24 (n = 409, 95% CI 3.45 to 7.75, $p < 0.001$). The OR of an entirely completed HEEADSSS assessment by those who had undertaken the intervention versus those who had not was 4.08 (n = 409, 95% CI 1.90 to 8.75, $p < 0.001$) (Table 1).

Table 1 Pre and Post Intervention HEEADSSS Completion Rates

Assessment Completion Status	Pre-Intervention (n = 210)	Post-Intervention (n = 94)	Odds Ratio (OR)	95% Confidence Interval	Pearsons Chi Squares p-value
Fully complete	9	34	4.08	1.90–8.75	<0.001
Partially or fully complete	54	105	5.24	3.45–7.75	<0.001

For the purposes of this study, a partially completed assessment was defined as an assessment that covers parts of the full HEEADSSS assessment with the young person. For example, a "partial HEEADSSS" is considered to have been completed if two or more elements from HEEADSSS has been covered such as "Home" and "Education". It was important that this was captured in this study as it showed a certain awareness by the clinician of the importance of certain psychosocial elements in adolescent care. The findings demonstrate not only statistical significance but also practical clinical impact, reinforcing the efficacy of low-cost, visibility-focused educational strategies in promoting adolescent psychosocial risk assessment in the emergency care setting.

Home and education were the most likely elements to be addressed in the partially completed assessments, both before and after the intervention. Drugs, alcohol, and sexual health issues were more likely to be addressed in the post intervention phase. The interventions did not impact the likelihood of suicidality or deliberate self-harm being spoken about with the young person.

The most common medical presentations were abdominal pain, chest pain, headaches and deliberate self-harm or low mood. There was a slight variability in the clinical presentations between the two groups. Abdominal pain was more common in the first group than the second (n = 52 v n = 36). There was one complete assessment done on patient presenting with abdominal pain in the pre intervention group and similarly one done in the post intervention group. Both complete assessments revealed positive findings. Chest pain was also more common in the first group than the second (n = 17 v n = 9); however, the second group were more likely to have either a partial or complete HEEADSSS done. Over half revealed positive findings. The cohort presenting with headaches was like the chest pain presentations in that, despite the first group having more presentations there were more assessments done in the second group. Consequently, there were more positive findings in the second group. The most common presenting complaint in the second group was deliberate self-harm and low mood. They all had either a complete or partial assessment done (Table 2).

There was a relatively even gender distribution across the two groups. There were a similar number of repeat presentations also. There were a higher proportion of patients with chronic medical or psychiatric conditions in the first cycle.

Table 2 Subcomponent Analysis Before and After Intervention

	Before Intervention	After Intervention	Pearsons Chi Square p-value
Home			
Performed	28	97	<0.01
Not performed	182	102	<0.01
Education			
Performed	33	96	<0.01
Not performed	177	103	<0.01

(*Continued*)

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Table 2 (Continued).

	Before Intervention	After Intervention	Pearsons Chi Square p-value
Eating			
Performed	20	64	<0.01
Not performed	190	135	<0.01
Drugs/Alcohol			
Performed	12	54	<0.01
Not performed	198	145	<0.01
Sex/Gender			
Performed	13	54	<0.01
Not performed	197	145	<0.01
Suicide/Self Harm			
Performed	12	64	<0.01
Not performed	198	135	<0.01

Discussion

Conclusions

The observed increase in the use and documentation of the HEEADSSS assessment following educational intervention represents a meaningful shift in clinical practice. For adolescents, this increase translates to significantly enhanced access to structured psychosocial screening during ED visits, enabling the identification of risk factors such as mental health concerns, substance use, family instability, and exposure to violence.[12] These are issues that are often under-recognised in acute care settings, despite being major contributors to adolescent morbidity and mortality.[18]

For clinicians, the uptake of HEEADSSS suggests improved confidence and competence in engaging with this patient group on sensitive topics. It also indicates the successful integration of a validated, structured tool into time-limited consultations, allowing for more comprehensive and ethically robust care without compromising workflow.[15]

The staff survey revealed a lack of awareness and lack of confidence surrounding the use of HEEADSSS amongst staff. These results enabled the education sessions to be tailored to their specific needs. We designed sessions that were interactive and focused on the specific deficiencies revealed in the survey. Role plays and simulations between staff members created a safe and productive learning environment. Additionally, each session concluded with a clear, and approved road map of what to do in the event of staff revealing positive findings in their assessment. As a result of this bespoke design, the sessions were effective and time efficient, with high staff turn out and engagement.

The increased usage suggests a growing institutional commitment to adolescent-centred care and highlights the feasibility of implementing low-cost, education-focused interventions to support psychosocial assessment in emergency settings. Ultimately, this shift supports earlier intervention, improves patient trust and satisfaction, and may have lasting impacts on adolescent health trajectories.

There is no current Irish or European literature on the use or the documentation of the HEEADSSS assessment in the paediatric ED. This study produced data specific to the Irish adolescent population presenting to a tertiary centre ED. The reason behind this data gap is unclear. It is likely a combination of lack of education about the importance of a holistic approach to adolescent healthcare, as well as an underestimation of the impact clinicians can make during their brief ED consultation with young people. There is a misconception amongst ED based clinical staff that completing a HEEADSSS is an arduous and time-consuming task.[15] Furthermore, there is a paucity of training tools available to clinicians looking

to upskill in the arena of adolescent medicine. This breeds a degree of reluctance to employ specific skills, such as taking a psychosocial history amongst doctors in training. This study highlights the efficacy of simple scaffolding interventions for staff as they embark on their training journey. However, for this change to be sustained there needs to be a shift in culture when it comes to how clinicians view adolescent patients in ED. Embedding a staff prompt such as the one suggested in this study into a national healthcare policy would not only increase the awareness of HEEADSSS but allow staff to access educational resources more readily.

We know from previous literature that the ED, albeit resource limited, is the most likely interface for adolescents and clinicians to interact. As such, equipping ED staff with the correct tools to assess adolescents and provide effective preventative health-care counselling is of utmost importance. Facilitating functional and structured risk assessments in the ED is the mainstay of adolescent ambulatory care.[3] Additionally, there is a call for international policy formation in the treatment and diagnosis of adolescent physical and mental health. HEEADSSS not only facilitates this but promotes it.[5]

The interventions used in this project were effective. The benefits of using the "PDSA" cycle approach in the context of our study are multiple. The efficacy of interventions used was rapidly assessable. This allowed some necessary adjustments to be made at the outset of the project. Such changes included adjusting the blank proforma and changing the material used in the lanyard attachment. The initial blank proforma was two pages long which led to confusion amongst staff resulting in poor compliance. This prompted the development of a revised, more refined version. This revision took place one day into the intervention phase, which meant it had limited impact on the over-all results. The initial lanyard attachment was too flimsy and easily lost. A more robust laminated version was introduced following this discovery which meant staff were able to keep their lanyard attachment intact throughout and, beyond, the study period. Ultimately, these minor changes strengthened the sustainability of the initiative without impacting our designated timeframe. The structure of a PDSA cycle welcomes failure to some extent. When failures are identified early in an improvement process, they can be transformed into successful and long-lasting interventions.[19] The staff survey employed in the second phase was goal focused and effective. It afforded staff a bespoke educational experience. Questionnaires are a useful method of assessing personal and professional barriers to, and facilitators in quality improvement at an organisational level.[20]

Psychosomatic illness is common amongst adolescents. That is, an illness or constellation of symptoms that are medically unexplained. The most likely instigator of these symptoms is psychosocial stress. Psychosomatic complaints in adolescents tend to present as non-specific abdominal pain, chest pain or headaches.[21] It is widely accepted that adult psychiatric illness lays its foundations in adolescence. The reasons for this are multifactorial. As previously discussed, many complex physiological and psychological changes occur during adolescence. It is during these pivotal years of development that important reasoning and interpersonal skills required for adulthood are established. If this development is disrupted, it can lead to mood and cognitive disorders. This disruption can come in the form of an organic illness, genetic predisposition, or exposure to psychological stressors.[22] Furthermore, we know that the adolescent brain has a heightened stress response owing to an increased sensitivity to circulating gonadal hormones.[23] It follows therefore that any additional, external stressors can have a significant impact on the fragile, developing adolescent brain. Furthermore, stress on its own, regardless of its' source acts as the perfect breeding ground for the development of psychosomatic illness.

Maladaptive health behaviours that emerge during the formative years of adolescence become fixed in adulthood and can have serious consequences on physical and mental health outcomes. It is important physicians treating adolescents recognise psychosomatic presentations to prevent this progression. Effective and open communication like that presented in the HEEADSSS assessment forms the cornerstone of treatment for such presentations.[24] It represents the perfect conduit for clinicians to become familiar with a young person's vulnerabilities, resilience, and protective factors. Armed with this knowledge, they can offer the necessary support required to navigate these complex presentations. An effective HEEADSSS assessment, albeit brief can have a lasting positive effect on the trajectory of a patient presenting with psychosomatic illness.[25] By equipping ED staff with the skillset to expose typical causative triggers of psychosomatic illness, we are ensuring a more holistic treatment pathway be adhered to. The increase in the number of positive findings revealed in the post intervention phase follows previously documented international healthcare trends.[14]

What This Means for Adolescent Health Research and Policy

The ED represents accessible healthcare for adolescents. Unfortunately, adolescents who use the ED as their main source of health care are more likely to engage in risky behaviour. They are also more likely to present with substance abuse and mental health problems, than those who attend a primary care physician as their routine healthcare. Furthermore, they are less likely to attend for review appointments.[3] With this in mind, the need for routine psychosocial risk assessments of adolescent patients in ED is heightened. While the ED is an undeniably busy, and often, structurally inappropriate environment for sensitive discussions with adolescents, it represents a unique opportunity for clinical staff to transform health damaging and maladaptive behaviour. The interaction, albeit brief, between an ED clinician and an adolescent patient may be the only time in that young person's life they are exposed to health promotion in an accessible and bespoke way.

Key Learning Points Against Public Health Standards

Although we have no current national guideline on the use of psychosocial risk assessment tools in the ED, we can look to our international counterparts for guidance. The AAP, along with the WHO recommends the use of routine psychosocial risk assessment tools, like the HEEADSSS assessment, on all adolescent patients presenting to the ED. Additionally, vulnerable adolescents are more likely to present to the ED than any other clinical setting. Furthermore, suicidality amongst adolescents is more likely to be exposed through an ED attendance than any other healthcare interaction.[26]

Limitations

It is important to be cognizant of the limitations of this study while interpreting its findings. Firstly, the dynamic nature of the ED lends itself to seasonal bias when undertaking any qualitative study. There is huge variability in the type and number of clinical presentations from month to month. This study spanned across the summer months. As such, it is likely that we did not maximize adolescent ED attendances as they tend to coincide with the academic calendar. This may have resulted in under representation of completed HEEADSSS assessments. Furthermore, this is a single centred study. For more reliable results, expanding our study profile to include several EDs based in different locations around Ireland would have been judicious.

The staff in the ED is another changing variable and an important confounding factor to consider when interpreting these results. In Ireland, medical staff rotate jobs every six months. Although, staff remained static across this study, the nomadic nature of NCHDs is something to be mindful of when gauging the sustainability of interventions. Furthermore, it is also important to consider the various backgrounds of clinical staff. Generally, the ED has staff from several different training programs, with vastly different experience and different levels of comfort in treating adolescent patients. At any given time, there could be paediatric, general practice and emergency medicine trainees. Furthermore, they may all be at very different stages in their respective training journeys, which plays a role in their confidence and competency adhering to recommendations such as the use of a psychosocial assessment tool for adolescent patients. This is again an important factor to consider when assessing adherence to clinical guidelines and implementing effective interventions.

It is also prudent to mention patient factors as a confounding factor in this study. A patient presenting with a mental health crisis, or an obvious eating disorder is more likely to have a psychosocial assessment done compared with someone presenting with abdominal or chest pain. Additionally, the frequency of ED attendance by a specific patient might also influence whether a clinician chose to do a thorough psychosocial assessment. It is reasonable to assume that a recurrent presentation of medically unexplained abdominal pain would result in a completed HEEADSSS assessment versus someone presenting for the first time with similar symptoms.

The EDs in Ireland are notoriously busy and constantly face staffing pressures. There is a high level of burn out amongst trainees rotating through Irish EDs. Furthermore, there is a high attrition rate among ED trainees.[27] When creating any clinical guidelines based in the ED, especially a risk assessment tool such as HEEADSSS, it is vital that policymakers are attune to the specific needs of the trainees who will be carrying out these assessments. There needs to be regular education sessions and support from consultants. Given the time pressure and high volume of patients

attending ED in Ireland, this poses an obstacle when implementing quality improvement interventions focused on staff education.[28]

While the interventions in this study were effective, it is important to consider their success beyond just one metric: documentation. Going forward, it would be prudent to employ different metrics of success to assess the sustainability of the interventions. Such metrics could include a repeat staff survey, a review of the number of social work and sub-speciality referrals following completed assessments. A reduction in inappropriate sub specialty referrals to gastroenterology and neurology and, an increase in warranted referrals to psychology and psychiatry teams are all likely outcomes of an effective HEEADSSS assessment. Furthermore, a closer look at sexual health disclosures could be monitored and the subsequent opportunities for staff to provide preventative counselling.

Implication Statement

This qualitative improvement initiative champions health promotion and preventative counselling amongst adolescents. HEEADSSS acts as a conduit between clinicians and teenage patients, a uniquely vulnerable, but very important patient cohort. By increasing the awareness, visibility and ultimately the use of HEEADSSS amongst doctors in the ED, the standard of care offered to adolescents is markedly improved.

Abbreviations

ED, emergency department, NCHD, non-consultant hospital doctors, PDSA, plan, do, study, act.

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Author Contributions

Dr. Miriam Smyth designed this study, collected and analysed the data and wrote this paper. Dr. Órla Walsh assisted with the edits of the written manuscript. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

The authors report no conflicts of interest in this work.

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