Teachers’ perspectives on the barriers to healthy lifestyle behaviors among adolescent girls of disadvantaged backgrounds in Ireland: A qualitative study

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ABSTRACT

Though adolescence is a particularly sensitive period regarding the development of long-lasting health-related attitudes and behaviors, little research has examined the factors which influence their engagement in such behaviors. Adolescent females are particularly sensitive to suffer from overweight and obesity. It is also a time that can impact the health patterns of future generations due to the influence of preconception maternal factors on the health of their offspring. Furthermore, much research has identified a strong socioeconomic gradient in obesity in Ireland, with individuals from low socioeconomic backgrounds being particularly likely to develop unhealthy habits. The current study aimed to develop an understanding of the factors which influence the health-related behaviors of adolescent girls of low-socioeconomic status in Ireland, an underrepresented yet particularly sensitive cohort. Semi-structured interviews were conducted with nine teachers from disadvantaged schools in Dublin and were examined using a thematic analytic approach. Nine themes were identified: lack of interest and knowledge, lack of self-confidence, the dual role of modern technology, behaviors of significant others, need for good role models, availability of convenience foods, inadequate existing approaches and initiatives, lack of resources to promote a healthy lifestyle, and living difficulties at home and in the community. Findings suggested ways for intervening at personal, interpersonal, organizational and community levels. In conclusion, a range of practical changes are required in the home, school, and community environments in order to improve the health of these individuals, and ultimately to improve the health of future generations.

1. Introduction

Adolescence is a period of vast psychological, physiological and social development, marked by transitions towards independence and the mature roles of adulthood, and the formation and establishment of personal values (Casey et al., 2010). Experimentation is a natural process of adolescence. Increased exposure to risky behaviors and increased social pressures to conform combined with adolescent experimentation often results in the development of unhealthy attitudes and behavior patterns, affecting both current and future health status (McAteer et al., 2017). Yet, attitudinal malleability provides an opportunity for positive behavioral shaping during adolescence, with potential benefits for long-term health outcomes (Dick & Ferguson, 2015). Thus, when aiming to improve the health-related attitudes and behaviors of future parents, adolescence may be a particularly important and effective intervention period, prior to the development of unhealthful patterns (Pringle, Doi, Jindal-Snape, Jepson, & McAteer, 2018).

Childhood obesity is a prevalent and persistent health concern in Ireland requiring early intervention in order to mitigate a range of long-term health consequences including premature mortality, cardiometabolic morbidity and a range of other physical morbidities in adulthood (Mangner et al., 2014; Park, Falconer, Viner, & Kinra, 2012; Reilly & Kelly, 2011). Findings from the Growing Up in Ireland study showed that about 30% of 13-year-old (Williams et al., 2018) and 17-18-year old (McNamara, Murphy, Murray, Smyth, & Watson, 2020) adolescent girls were affected by overweight and obesity. Particularly notable were the findings that girls in general, and adolescents from lower socioeconomic backgrounds were more likely to suffer from
overweight or obesity (Williams et al., 2018). While much research has reiterated these findings of a strong socioeconomic gradient in childhood obesity in Ireland (Keane, Layte, Harrington, Kearney, & Perry, 2012; Madden, 2017; Walsh & Cullinan, 2015), little research has extended to examine and identify the factors which underpin such observed inequalities. Quantitative findings from the Health Behaviour in School-aged Children in Ireland showed adolescents from lower social classes being more likely to consume soft drinks and chips on a daily basis as compared with those from higher classes (Kelly, Callaghan, Molcho, NicGabhainn, & AlforqueThomas, 2019). Likewise, belonging to low social classes was associated with lower intakes of fruit and vegetable among adolescents (Kelly et al., 2019). However, only a few studies with a qualitative design carried out in other countries have investigated the perspectives of low socioeconomic status (SES) adolescents on those factors that influence their lifestyle behaviors such as eating and physical activity behaviors. Focusing exclusively on food choices, findings from focus groups carried out with American adolescents identified a wide range of factors influencing food choices such as hunger and food cravings, food characteristics (taste, appeal, convenience, cost, related benefits), food availability, parental influences, personal factors (mood, body image, habits, time), media and vegetarian beliefs (Neumark-Sztainer, Story, Perry, & Casey, 1999). Similarly, time, cost, availability, accessibility, convenience, social support and role-modeling behaviors of adults were identified as key factors that influenced not only food choices, but also the choice to be active physically in a sample of adolescents attending an alternative school in the United States (Kubik, Lytle, & Fulkerson, 2005). Goh et al. (Goh et al., 2009) assessed the potential barriers to both healthy eating and physical activity among an American sample of adolescents. Lack of accessible nutritious food in the neighborhood, poor quality of physical education in school, household high sedentary levels and lack of nutrition knowledge were among those barriers described. In Ireland, McEvoy et al. (McEvoy, MacPhail, & Enright, 2016) investigated the barriers and facilitators to physical activity among 15-19-year-old adolescents in an area of disadvantage. Aspects such as support and influence of family, friends, and peers, the school culture, and the life in their community emerged as the main aspects that affected their physical activity habits.

Further research on childhood obesity has identified strong maternal influences on the risk of their offspring suffering from obesity, with significant relationships observed between mothers’ physical health before and during pregnancy, and her child’s subsequent risk of suffering from obesity (Godfrey, Gluckman, & Hanson, 2010; Kaar et al., 2014; Sridhar et al., 2014). Research focusing on pre-conception maternal factors suggests the relevance of addressing maternal health prior to conception (Ehrenthal et al., 2013). Risk factors present during the pre-conception period of the mothers’ life were found to make a greater contribution to the child’s subsequent weight status, and hence make a greater contribution to the child’s risk for developing obesity (Ehrenthal et al., 2013). Thus, in order to improve the health of our nation’s children, interventions may be necessary early in women’s lives (future mothers) prior to pregnancy, and prior to the development of health-related attitudes and behaviors. Existing literature shows that health-related lifestyle behaviors such as physical activity and eating habits that are established during adolescence tend to track into adulthood (Ambrosini, Emmett, Northstone, & Jebb, 2014; Hayes, Dowd, MacDonncha, & Donnelly, 2019; teVeldde, Twisk, & Brug, 2007). This fact further reiterates the relevance of intervening with adolescent girls as future mothers, particularly with those affected by overweight and obesity.

In order to understand appropriately the complexity of public health challenges, they need to be addressed from a multiple level approach rather than from a single level analysis (Robinson, 2008). The Social Ecological Model (SEM) is a theory-based framework that portrays the multifaceted and interactive effects of personal and environmental factors that determine health behaviors (Centers for Disease Control and Prevention, 2020; McLeroy, Bibeau, Steckler, & Glanz, 1988). The model includes five hierarchical levels: individual (knowledge, attitudes, behaviors), interpersonal (family, friends, social networks, etc.), community (relationships between organizations), organizational (organizations and social institutions, e.g., schools) and policy/enabling environment (national, state, local laws). The SEM approach has been widely and effectively used in public health prevention interventions that aim to change individuals’ behavior by targeting all the levels of the model. Therefore, investigating the determinants of healthy lifestyle among girls of disadvantaged backgrounds using the SEM model will allow to identify and address those factors that can influence behavior change at each of those levels.

Although previous research has identified the perceptions of Irish adolescents on food choices (Fitzgerald, Heary, Nixon, & Kelly, 2010; Trew et al., 2005) and on physical activity (McEvoy et al., 2016), no studies have specifically focused on girls of deprived backgrounds in Ireland from a teachers’ perspective. Together with parents, teachers are the adults with greatest interaction with adolescent girls and can play a major influence on the students’ wellbeing and development (Hilton & Hilton, 2010; Pendergast & Main, 2017). However, as opposed to parents, teachers engage daily with a large number of adolescents and are exposed to a diversity of adolescent behaviors (Hines & Paulson, 2006). For that reason, they can provide information from a more external and broader point of view considering the girls’ behavior in the school setting, the interactions with their peers and the impact of the school environment on their lifestyle. Teachers’ perceptions can add further insights into the aspects that may prevent disadvantaged adolescent girls from engaging in healthier lifestyle behaviors from a different perspective. Therefore, the aim of the current study was to develop an understanding of the barriers which impact adolescent girls’ engagement in healthy lifestyle behaviors in disadvantaged areas from a teachers’ perspective using the SEM. As an understudied, particularly sensitive and impactful cohort as future mothers, the study aimed to identify what specific factors make engaging in healthy lifestyle behaviors difficult for such cohorts, and how these may be addressed in order to improve the lives of these girls, along with the health of their future offspring. Identifying such barriers will lend itself as a starting point towards designing and developing effective and appropriate interventions to mitigate the rise in overweight and obesity rates in Ireland and reducing its prevalence in future generations. A qualitative semi-structured interview approach was taken, in attempt to gain a holistic, all-encompassing account involving the perspectives of secondary school teachers. The following research question was addressed: what are the barriers, according to secondary school teachers, which impede on adolescent girls’ engagement in healthy lifestyle behaviors in areas of low socio-economic status?

2. Method

2.1. Study design

The lack of available information on the specific influences which impact the lives of disadvantaged female adolescent cohorts provided the rationale for this qualitative study. Ethical approval was granted from the University College Dublin Human Research Ethics Committee (reference number LS-18-69-Bel-Serrat). Semi-structured interviews were employed in order to gain insight into the lives of these girls within the context of their environment (Spradley, 1979). This involved the second-hand accounts of the secondary school teachers who interact with these students on a daily basis, a particularly relevant source of information. As participants were recruited from a range of schools across county Dublin, and due to governmental social distancing guidelines in place during the COVID-19 pandemic, online one-to-one interviews were necessary. Research comparing data generated through in-person versus online focus groups with adult participants has shown that the content of the data generated by the two formats is similar (Woodyatt, Finneran, & Stephenson, 2016).
This study was carried out alongside focus groups which examined the same research question from the adolescents’ perspective, in order to strengthen the validity of findings and/or to identify any discrepancies in perspectives.

2.2. Participants and recruitment

Participants consisted of nine teachers from DEIS (Delivering Equality of Opportunity in Schools) schools in disadvantaged communities in County Dublin. DEIS schools were identified by the Irish Department of Education and Skills based on the following variables: unemployed parents, percentage of local authority accommodation, percentage of lone parenthood, percentage of Travellers (Irish ethnic minority) percentage of children eligible for free book grants and percentage of large families (i.e. ≥5 children) (Archer & Sofroniou, 2008; Department of Education and Skills, 2020).

Purposive sampling was initially employed for this study. A publicly available list of contact details of secondary DEIS school principals based in Dublin was obtained from the Irish Department of Education and Skills website. Although teachers of all subjects were approached, only physical education and home economics teachers and a home-school liaison officer agreed to take part in the study. Researchers sent a recruitment e-mail to teachers via 55 secondary DEIS school principals. Three teachers responded to that email. Snowball sampling was then used whereby recruited participants suggested potential additional participants, bringing the total sample size to nine participants (Patton, 2002). Information sheets and consent forms were created on QualtricsSM software (SAP Software Solutions, London, England) and were read and signed by each participant prior to the scheduling of each interview. As video interviews were employed, participants’ data was initially identifiable. Following transcription, data was de-identified and given a participant number, and video recordings were deleted in line with data protection guidelines.

2.3. Data collection

Semi-structured interviews were carried out by a researcher (RM) between May and July 2020, until a distinct saturation point was met. Data saturation was considered to be reached when the researcher began to hear the same comments from new interviewees, and no new ideas were emerging in the data. A semi-structured protocol was followed with questions addressing/covering the barriers and facilitators which impact on the lives of adolescent girls from disadvantaged communities (Table 2). This guide was refined and revised appropriately after each interview. Due to government restrictions and social distancing guidelines in place with the COVID-19 pandemic, interviews were carried out using online video calling software (Zoom Video Communications, Inc, San Jose, CA, US). Interviews were recorded for transcription purposes using the built-in record function. Recordings were exported and stored in a secure folder and were transcribed verbatim and de-identified before being deleted. Open-ended questions were asked to avoid biasing respondents’ answers, and follow-up probes were employed when necessary (Spradley, 1979). Each interview lasted between 30 and 40 min.

2.4. Data analysis

Data analysis was carried out collaboratively between the researcher who conducted the interviews (RM) and another researcher (RQ). An inductive thematic analytic approach was taken in which themes were identified from the data. Analysis was exploratory and descriptive in nature, aiming to gain novel understandings of the factors at play in these adolescent girls’ engagement in (un)healthful lifestyles. Themes and codes were identified at a semantic level and Braun and Clarke’s (Braun & Clarke, 2006) guidelines for the conduct of thematic analysis were followed.

The two researchers independently read the transcripts and identified codes for units of text (phrases, sentences, short paragraphs). Initial codes were noted in the margin of the transcripts. Researchers (RM and RQ) met and discussed these codes before repeatedly re-reading and reviewing transcripts and codes in an iterative manner according to newly emerging concepts. Interview by interview, researchers independently clustered codes together into meaningful groups in order to generate potential themes. Codes were exhaustive and were not mutually exclusive as some units were applicable to more than one theme. As this analysis was sequential in nature, researchers may be primed to certain aspects of the data when analyzing later transcripts, but the researchers attempted to look at each interview independently. Findings from each individual interview were then compared and reviewed, and comprehensive themes were generated which accounted for all participants. The remainder of the analysis was carried out collaboratively. The two researchers met frequently in order to discuss, review and finalize themes, until all data were satisfactorily accounted for. Significant agreement emerged between coders. Comparisons were made and codes and themes were consistently checked and rechecked between coders in accordance with Levitt et al.’s (Levitt et al., 2018) guidelines in order to ensure strong consistency in the analyses. Disagreements were resolved through exhaustive discussion until full agreement was met. Representative quotes for each theme were then chosen, as displayed on Table 3.

2.5. Researcher reflexivity and trustworthiness

The position of the researcher, their context, biases, values and background have the potential to influence the interpretation and dissemination of findings (Coghlan & Brydon-Miller, 2014; Levitt et al., 2018). It must be noted that the investigator had an existing relationship with one participant. As this was a second-hand account of a topic which was not personal to the participants themselves, this was not deemed to be problematic. Conversely, this may have positively impacted the ease of information disclosure due to previously established rapport.

The researcher conducting this qualitative study was a female

| Participant demographic details. |   |   |   |   |
|--------------------------------|---|---|---|---|
| Participant | Sex | Age Group (years) | Position |   |
| 1 | Female | 20–30 | Home Economics Teacher |   |
| 2 | Male | 50–70 | Physical Education Teacher |   |
| 3 | Female | 50–70 | Home Economics Teacher |   |
| 4 | Female | 20–30 | Home Economics Teacher |   |
| 5 | Male | 30–50 | Physical Education Teacher |   |
| 6 | Female | 30–50 | Physical Education Teacher |   |
| 7 | Female | 30–50 | Physical Education Teacher |   |
| 8 | Female | 50–70 | Home-School Liaison Officer |   |
| 9 | Female | 20–30 | Home Economics Teacher |   |

Table 2

Interview topic guide.

| Lifestyle Behaviors |   |
|---------------------|---|
| 1. What does lifestyle/healthy lifestyle mean to you? |   |
| 2. How important do you feel lifestyle is during adolescence? |   |
| 3. What do you think of the lifestyle of teenage girls in this area? |   |
| 4. Do you think they could have healthier lifestyles than they currently have? Why? |   |
| 5. Do you think they have enough knowledge/information on how to follow a healthy lifestyle? |   |
| If not, why? Where should they get this information? |   |
| 6. What is the role of the school in promoting healthier lifestyle among these girls? |   |
| 7. What are the main barriers to healthy lifestyle in this area? |   |
| 8. What are the main barriers to health promotion in this area? |   |
| 9. What would motivate them to change their lifestyle behaviors and acquire healthier habits? |   |
| 10. Who would encourage them the most to change their lifestyle behaviors and acquire healthier habits? |   |

1. What does lifestyle/healthy lifestyle mean to you? 2. How important do you feel lifestyle is during adolescence? 3. What do you think of the lifestyle of teenage girls in this area? 4. Do you think they could have healthier lifestyles than they currently have? Why? 5. Do you think they have enough knowledge/information on how to follow a healthy lifestyle? If not, why? Where should they get this information? If yes, where do they get this information from? 6. What is the role of the school in promoting healthier lifestyle among these girls? 7. What are the main barriers to healthy lifestyle in this area? 8. What are the main barriers to health promotion in this area? 9. What would motivate them to change their lifestyle behaviors and acquire healthier habits? 10. Who would encourage them the most to change their lifestyle behaviors and acquire healthier habits?
### Table 3 (continued)

| Theme                               | Subtheme                          | Example                                                                                     |
|-------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------|
| Availability of convenience foods   |                                   | What are the attitudes of your friends, so your peer group has a huge influence on you, so if its normal for them to eat snacky, junky bits, its normal for you. P.3 |
|                                     |                                   | It’s that incidental physical activity that we all would have done growing up. When I was training as a kid, you’d have to walk to training, to train, and walk home from training after. So there’s less of that happening. P.5 |
|                                     |                                   | I teach SPHE (Social, Personal and Health Education), and trying to figure out what activities they do … like they don’t have hobbies and it’s really sad to see. P.1 |
|                                     |                                   | You teach them the information, but they’re like, ‘oh, well, this is what my friends do, So I’m just going to get this.’ P.4 |
|                                     |                                   | So their need to belong is eh … Tough on them, but it supersedes a lot of their lifestyle choices. P.2 |
|                                     |                                   | If the money is given, generally they’ll go to the chipper or to the [local shop] for the chicken fillet rolls. P.6 |
|                                     |                                   | But I believe they (takeaways and instant food) are a very normal part of people’s lifestyles now. P.3 |
|                                     |                                   | The proliferation of takeaways is high. So I think, the odds are stacked against them to have a good lifestyle. P.2 |
|                                     |                                   | Maybe the cost. The first time I tell the girls about like eating healthy, they’re like, ‘mum, we can get [fast food meal] for like five euro, and if you want to go to [salad bar] it’s like 10 euro.’ P.4 |
|                                     |                                   | But the level of deprivation in the area is a massive hindrance because the majority are single parent families who are struggling … The level of housing and the support available isn’t great at all. P.9 |
|                                     |                                   | Yeah, they would have all witnessed at some stage, some sort of addiction. P.6 |
|                                     |                                   | Some of those kids have to parent their parents. Some of those kids are basically expected at 12/13 be the adult at home. It’s not healthy at that age to have that amount of responsibility put on a child, because they’re still kids. P.9 |
|                                     |                                   | A lot of like crime and that goes off and where they live, as well. So that has a huge impact on their lifestyle as well. P.4 |
|                                     |                                   | In certain areas of the city, with crime and drugs and stuff, kids don’t go out as much, they don’t play as much. P.5 |
|                                     |                                   | I think somebody who can relate to them, I think it has to be someone from their own background. P.1 |
|                                     |                                   | They need good role models in life as well. At home, society outside of school, because that’s really, really important. P.5 |
|                                     |                                   | Workshops, yeah or speakers or someone that comes in. Us telling it to them is kind of … ‘yeah yeah yeah right ok we’re finished home ec [economics] now let’s move on to the next class.’ P.3 |
|                                     |                                   | But I remember an issue in Social, Personal and Health Education this year, one girl had VERY low self-esteem, but she aspired to be like these women on Instagram. And no amount |

(continued on next page)
postgraduate psychology student. This researcher had previous experience in qualitative research at a postgraduate level and has a long-standing personal interest in the topics of nutrition and exercise, and more specifically in the topic and impacts of weight bias among children and adolescents. Strong personal opinions and awareness of the sensitivities of such topics may have the potential to impact objectivity during the analytic process. In order to minimize such biases a reflexive approach was taken, and a second researcher was collaborated with throughout the analytic process. The second researcher was a female psychology graduate with a masters in primary school teaching. As a trainee teacher, this researcher was understanding of the teacher-student relationship and sensitive to the attitudes and behaviors and experiences of younger cohorts.

The Standard Reporting Checklist for Qualitative Research (SRQR) (O’Brien, Harris, Beckman, Reed, & Cook, 2014) was used in order to improve the transparency of all aspects of this qualitative research.

3. Results

Seven females and two males took part in the study, with a wide age range (approximately 22–65 years). Physical education teachers, home-economics teachers and one home-school liaison officer participated (Table 1). The SEM of health was exclusively applied to report the findings of this study (Fig. 1) (McLeroy et al., 1988) and it was not used for other purposes beyond the reporting of the study findings. Nine themes were identified from these data. Factors which influence adolescent girls’ engagement with lifestyles include lack of interest and knowledge (3.1), lack of self-confidence (3.2), the dual role of modern technology (3.3), behaviors of significant others (3.1), need for good role models (3.2), availability of convenience foods (3.1), inadequate existing approaches and initiatives (3.2), lack of resources to promote a healthy lifestyle (3.3), and living difficulties (3.4).

3.1. Individual level

3.1.1. Lack of interest and knowledge

Many participants (n = 7) noted that the girls lack the basic knowledge, and/or basic skills required to make healthy decisions and lead healthy lifestyles; both in terms of nutrition and food preparation, and in terms of exercise and physical activity. Participants believed that
the girls are unaware of the relevance and importance of such habits, and “don’t think they realize the impact of unhealthy lifestyles” (P.1). Respondents indicated beliefs that many girls do not care about living a healthy lifestyle. Further, four individuals noted that the girls are reluctant to try new things: “it’s going away from the cereal bars and the juices to homemade porridge and fruit in the mornings. But a lot of them have never had it before and are afraid to try it. So getting them to try different things [is difficult]” (P.7). In addition, a disconnect between what girls are being taught and their inability or lack of interest to put it into practice seemed to be present. This was reflected by one participant: “I think they have [enough information]. But again, it’s given to them, but how much have they actually taken in and how much of them think it’s relevant to them ...” (P.6).

3.1.2. Lack of self-confidence
Another salient barrier which emerged was the girls’ lack of self-confidence. Teachers noted that the girls lack the confidence to try new things regarding both exercise and nutrition; “they’re insecure in themselves so they’re afraid to perform” (P.2). Insecurities and issues surrounding self-esteem and body image were also frequently noted by four participants as a barrier to engagement in healthy living. One participant attributed self-esteem issues to the unrealistic standards generated and promoted to adolescent girls on social media (see Table 3). Body-consciousness, along with the self-consciousness around personal abilities impacts on their engagement in many types of activities, as encapsulated by participant 9:

“And girls are definitely more conscious of it. They went swimming as part of wellbeing this year. Some of the girls were all for it which was great. But then you had some who didn’t know how to swim, first of all so they were mortified. You had some who were very conscious of their body shape and weight so didn’t want to go”.

3.1.3. The dual role of modern technology
Conflicting thoughts among teachers regarding the effects of modern technology were observed. Most respondents (n = 6) indicated its potential to be both helpful and/or harmful to adolescent health, e.g., “I think at the moment where they get an awful lot of content from is probably the internet and social media, which again, flip a coin and tell me if it’s good or bad. I’m not sure really” (P.5). Although TV, computer games, phones and the internet often negatively impact activity levels and sleep, the internet and social media also offer opportunities to easily access a broad range of information. Particularly cautioned however was the potential for misinformation on such platforms, e.g., “the quality of content they’re getting is probably not high. I think they’re getting some kind of info on physical activity and Physical Education, but they’re probably not getting fantastic information if they’re getting it off the Kardashians” (P.5). Newly available technologies such as Fitbits and exercise apps on smartphones were also noted as offering potential benefits in increasing activity levels.

3.2. Interpersonal level

3.2.1. Behaviors and attitudes of significant others
According to teachers, the attitudes, values, norms and behaviors of significant individuals in the girls’ lives have an impact on their own subsequent attitudes and behaviors. This was illustrated when participants noted that both parents and peers are highly influential. Regarding parents, disinterest was prominent, with notable advantages evident among the minority of girls whose parents did show interest in health and nutrition: “if they had motivation from home it would be easy to follow because you see the ones with healthier lifestyles and healthier backgrounds” (P.1). Parental influence was a prominent theme across the dataset with five participants noting this as the biggest barrier: “On barriers] But attitude of influential people in their lives. Be it the adults, their parents, grandparents, friends, etc. They’re the biggest things” (P.8).

Teachers noted that peer attitudes and behaviors are particularly influential during this developmental period due to adolescents’ need to ‘fit in’; “So their need to belong is eh ... Tough on them, but it supersedes a lot of their lifestyle choices” (P.2). Behaviorally, this typically involves a lack of hobbies and unstructured play. Adolescent girls in these communities “don’t go out as much, they don’t play as much [...] I think physical activity is more organized. Its more structured” (P.5).

3.2.2. Need for good role models
Participants highlighted the importance of relatable role models in the girls’ lives. Someone from a similar background is important, who “don’t go out as much, they don’t play as much [...] I think physical activity is more organized. Its more structured” (P.5).

3.3. Organizational (school) and community levels

3.3.1. Availability of convenience foods
Proliferation of the availability of convenience foods in these communities was described as a significant barrier in adolescent girls’ nutritious eating habits. This results in poor dietary choices among both the parents and the adolescents themselves. Special offers, convenience foods and takeaways are particularly accessible, affordable and appealing, and are proposed to account for problematic dietary habits as mentioned by one participant: “Maybe the cost. The first time I tell the girls about like eating healthy, they’re like, ‘miss, we can get [fast food meal] for like five euro, and if you want to go to [salad bar] it’s like 10 euro’” (P.4).

This has been deemed a structural issue within the girls’ environment, as one participant noted that “[because] the proliferation of takeaways is high. The odds are stacked against them to have a good lifestyle” (P.2). Adolescents themselves cannot be blamed for choosing the easy and available options.
3.3.2. Inadequate existing approaches and initiatives

It is clear from the data that there are some school and community initiatives in place, however, many inadequacies were highlighted. Participants suggested necessary changes for such initiatives to be effective. Three types of suggestions were evident regarding sports and exercise, information and education, and the importance of primary school (Table 3).

In terms of sports and exercise, participants described teenage girls as being “not as competitive” when compared with their male counterparts. According to the teachers, they tend not to enjoy and thus not to engage in competitive sports. Both gym and dancing have been suggested to have a positive impact on the girls. Four participants noted that gym and dance classes should be made more available to encourage participation. One teacher also suggested the potential benefits of making physical education (PE) classes an exam subject, giving pupils a specific incentive to engage. Engaging in exercise needs to be made easy for the girls and facilities should be widely available in order to enhance participation.

In terms of information and education, the girls need to be taught basic skills and information. Participants suggested that this should be repetitive and all-encompassing, with “constant recapping and reminding” (P1). Active learning approaches and small group structures should also be employed for maximum impact.

Repeatedly noted by six interviewees was the importance of introducing the subject of health, nutrition and physical activity, along with healthy lifestyle initiatives at primary school level rather than introducing the topic at secondary level. Participants highlighted the need to start early with children, such that habits and attitudes become engrained prior to adolescence.

This theme comprised rich suggestions which were evident across all participants, with strong proposals regarding societal changes in order to elicit meaningful change.

3.3.3. Lack of resources to promote healthy lifestyle

Again, at a societal level, change is impeded by a notable lack of resources in both the schools and the communities. While funding for initiatives and facilities in the school setting is indeed scarce, four teachers noted that time is a particularly limited resource in secondary schools, e.g. “Every time a new obesity study comes out or a new diabetes study comes out, we would tend to hear “Oh, that’s the role of the school”. Timetable wise, we don’t have that. If I got to meet them five times a week, I could make them fit, but I don’t” (P.5).

As highlighted in the living difficulties section (theme 4.1), adolescents in these areas lack safe places to play within the community. Some initiatives have been beneficial for adolescents (e.g., park run, youth clubs), however, such structures are again limited due to a lack of facilities, time and space, e.g., “I think we are not going to get that much choice to play as much”.

3.4. Societal

3.4.1. Living difficulties

Living difficulties both in the home environment and in the community environment are prominent. Five participants spoke of unemployment, alcoholism, and addiction in these areas, affecting most of the families in their schools. In the home, there is a lack of parental resources. Financial poverty is common, as well as a reduced mental capacity to commit to their children; “if you’re an alcoholic mother in (disadvantaged area), or an unemployed young father in (disadvantaged area) and you’re struggling, you don’t have the mental resources to constantly help your kids” (P.2).

Particularly notable was the finding that it is typical for the adolescent girl to be the main caregiver in the family. Three participants highlighted this, with one participant noting that “Some of those kids have to parent their parents. Some of those kids are basically expected at 12/13 to be the adult at home. It’s not healthy at that age to have that amount of responsibility put on a child, because they’re still kids” (P.9). Huge additional responsibility is placed on adolescent girls from these areas, significantly impacting on their ability to attend to their own education, nutrition, and physical activity needs.

Crime, violence and addiction are also common in these community areas. Adolescents tend to stay home due to the lack of facilities, and particularly the lack of safe places. As noted by participant 5, “In certain areas of the city, with crime and drugs and stuff, kids don’t go out as much, they don’t play as much”. However, health implications for those who do go out and do get caught up in such dangerous behaviors are likely to be especially adverse and destructive.

4. Discussion

The aim of the present study was to explore and identify the barriers which affect engagement in healthy lifestyles among adolescent girls from disadvantaged areas of Dublin, using the second-hand accounts of their secondary school teachers. Results from this inductive thematic analysis identified nine main barriers, encompassing various levels of the SEM (McLeroy et al., 1988) (Fig. 1).

On an individual level, these adolescent girls were reported to display a lack of interest and knowledge, both of which impede on their engagement with healthy lifestyle behaviors. Quantitative results from the Health Behaviour in School-aged Children showed that Irish boys were more likely than girls to report being physically active. Furthermore, Irish girls and teenagers from lower social class groups were more likely to report participating in vigorous exercise less than weekly as compared with boys and those from higher social class groups, respectively (Költo et al., 2020). A systematic review of qualitative studies on adolescent girls’ perceptions to physical activity summarized the barriers to physical activity performance experienced by this group (Corr, McSharry, & Murtagh, 2019). In this regard, the authors identified four main themes: 1) gender bias in sport in a society that considers physical activity as something masculine; 2) lack of motivation among those girls with low perceived competence as a result of low levels of perceived skill to do physical activity, a dislike of team sports, and negative feedback from peers and teachers; 3) competing priorities with other life-related aspects such as school work, part-time jobs, and home responsibilities, and lack of prioritization of physical activity; and 4) the influence of external factors such as the environment and the role of peers and adults.

In terms of information and knowledge, our data contradict previous research in which focus groups with adolescents from an ethnically and socioeconomically diverse population displayed promising levels of knowledge and awareness about the impacts of unhealthy habits (Croll, Neumark-Sztainer, & Story, 2001). However, Croll et al. (Croll et al., 2001) further noted a specific lack of concern regarding following healthy eating recommendations. Such lack of concern may account for the perceived lack of knowledge reported by the teachers in this study.

Quantitative research supports the finding that low self-confidence and self-esteem may impact on girls’ engagement in healthy lifestyle behaviors. Such constructs have been associated with adverse outcomes, with much research suggesting significant associations between self-esteem and disordered eating, exercise patterns, and body dissatisfaction among adolescent girls (Furnham, Badmin, & Sneade, 2002; Mooney, Farley, & Strugnell, 2004). More recent investigations have suggested that these constructs are particularly impactful for girls from low SES backgrounds, highlighting the importance of specific interventions attempting to mitigate such outcomes among this particular cohort (van den Berg, Mond, Eisenberg, Ackard, & Neumark-Sztainer, 2010). However, there seems to be a lack of qualitative studies on how adolescent girls’ self-esteem could particularly impact their lifestyle.
At an interpersonal level, it is well established that children and adolescent attitudes and behaviors are significantly influenced by the behavior of those around them as encapsulated by Bandura’s (Bandura, 1977) social learning theory. This theme was salient across all nine participants, highlighting both parents and peers as having a profound impact on the lifestyles of these adolescent girls. Respondents reinforced previous qualitative findings of the importance of parental interest, engagement, encouragement and praise on their adolescents’ opinions and engagement in physical activity (Corr et al., 2019), along with the importance of parents providing healthful food in low SES households (Evans, Wilson, Buck, Torbett, & Williams, 2006). Parenting has been found to directly influence the health risk behaviors of adolescent girls from disadvantaged socioeconomic backgrounds (Kwon & Wickrama, 2014).

While parents are of utmost importance regarding particular control of physical activities and dietary behaviors, adolescence is a developmental period which is typically marked by a shift from parents to peers being the most significant attitudinal and behavioral influence (Borsari & Carey, 2003; Brauer & De Coster, 2015). Results from the current study extend on previous findings identifying peer influence on adolescent healthful behaviors, particularly when it comes to dietary choices and physical activity (Corr et al., 2019; Evans et al., 2006; Krolner et al., 2011). From a physical activity standpoint, this paper suggests that a lack of hobbies and activities in an adolescent’s peer group may adversely impact their own wellbeing. Such norms and potential ideals of inactivity may be significantly impacting on the well-being of these adolescent girls.

It is perhaps unsurprising that the lives of these girls from disadvantaged areas are impacted by both living difficulties in the home and in the community. A novel finding in this theme, however, was the prominence of responders noting that adolescent girls in these schools are often the main caregiver in their household. Previous research has highlighted gender boundaries which undermine girls’ physical activity and healthy eating habits, noting that adolescent girls from disadvantaged areas are often burdened with being responsible for the chores and the housework in the home (Jonsson, Larson, Berg, Korp, & Lindgren, 2017). However, findings of this study suggest that not only do the girls face the pressure of caring for the house, but also the additional responsibility of caring for their siblings and, in many cases, their parents. With this immense responsibility, personal health is not a priority as the girls may not have the resources to care for themselves.

Findings suggest that the girls may benefit from positive interpersonal influence from real life, relatable and encouraging role models. Regarding general education, Hannon et al. (Hannon, Faas, & O’Sullivan, 2017) found that mentoring relationships and broader networks of relatable role models are particularly beneficial and effective for those who come from disadvantaged backgrounds, providing trustworthy information and influence. While little research has examined the impacts of such role models on health outcomes specifically, this may suggest similar positive outcomes from such interactions with respect to health specific education and behaviors. Future research is required to examine this influence.

From a broader lens, inadequate existing approaches and lack of resources reinforce the requirement for change within the community. Particularly salient was the teachers’ assertions that such topics must be addressed with the girls in primary school, prior to adolescence. The need to start early is supported by a range of literature on the importance of introducing health habits at an early age with the engraining of such attitudes and behaviors in early years of life (Birch, Savage, & Ventura, 2007; Janz et al., 2002; Mameli, Mazzantini, & Zuccotti, 2016; Schwartz, Scholten, Lalanne, Weenens, & Nicklaus, 2011; Weihrauch-Blüher et al., 2018); Finally, some participants highlighted the dual role modern technology may have on girls. This is in line with a growing field literature on the positive and negative impacts of modern technology on adolescent health outcomes. A review carried out by Dienlin and Johannes (Dienlin & Johannes, 2020) on the impact of digital well-being in adolescents’ well-being concluded that both low and excessive use decreased adolescents’ well-being, whereas moderate use was associated with increased well-being. A systematic review of reviews found evidence of the association between higher levels of screen time and a variety of health harms such as adiposity, unhealthy diet, depressive symptoms and quality of life in children and adolescents (Stiglic & Viner, 2019). On the contrary, a study carried out in three nationally representative large-scale data sets from Ireland, the United States, and the United Kingdom only observed little evidence for substantial negative associations between digital-screen engagement and adolescents well-being (Orben & Przybylski, 2019). While modern technology is often condemned, existing literature is not consistent on the role that plays on adolescents’ health.

### 4.1. Practical implications

Findings of this study highlight a range of practical implications with regards to reducing negative health outcomes and promoting positive health related change for adolescent girls from disadvantaged areas in Dublin. Specific skills for accessing high-quality information and avoiding misinformation online should be taught, and newly developing accessions and technologies should be harnessed to encourage lifestyle change among young girls in an effective and relevant way. A lack of interest among the girls makes it difficult to trigger motivation to engage with health-related content and interventions. Future research and interventions may foster adolescent interest by utilizing modern technology as an accessible and interactive platform for addressing such issues. According to previous research on preferences for behavioral weight loss interventions (Lee et al., 2021), adolescent girls in the United States affected with overweight and obesity identified incentives, engaging activities, electronic communication, and socialization and building relationships as factors that could influence their engagement in this type of interventions. These findings highlight the importance of future approaches to adapt and develop with an evolving modern society. Further, it is evident that the attitudes and behaviors of significant others may be particularly important to address when designing intervention programs, recognizing the adolescent within her social environment. Researchers, practitioners and intervention designers and promoters must not ignore the importance of preserving and nurturing the girls’ self-confidence and self-esteem in the process.

This paper further presents clear structural and environmental barriers at a community level which may be addressed in order to limit the development of unhealthful lifestyles and behaviors among such cohorts. Such actions may indirectly improve the health of these girls. Novel findings from this study regarding adolescent girls’ caregiving obligations in low SES households suggest that specific input is required from both local authorities and at a government level. Smaller and achievable immediate environmental changes have been suggested. For example, community structures may address providing more of what the girls enjoy, which, according to these teachers, may include group gym and dance classes, and non-competitive exercise/sports. This is an accessible and feasible change which may have a significant practical impact. Structural changes in disadvantaged communities with respect to funding may be also necessary, as proposed by the teachers themselves (see Table 3), addressing both the lack of adequate health and exercise facilities in the school and community such that adolescents can adequately attend to and prioritize their own needs. At a governmental level, teachers suggest a necessity to re-assess the school curriculum, both in terms of providing more resources (time and money) to schools for health-related initiatives and facilities and in terms of introducing these earlier in the children’s education (i.e., in primary school).

It is important to note that while teachers discussed health and wellbeing, including weight related topics, there was no evidence of recognition that obesity is a clinical condition requiring medical care. The Department of Health in Ireland, World Health Organization, American Medical Association, and Food and Drug Administration have...
all recognized obesity as a clinical disease (Gregg et al., 2016; Ng et al., 2014; Stevens et al., 2012) (Gregg et al., 2016; Ng et al., 2014; Stevens et al., 2012). This lack of consideration may be indicative of weight bias, i.e., negative attitudes towards individuals suffering from overweight and obesity, and weight-based stigmatization (Puhl & Latner, 2007) among the teachers. In fact, previous research has found weight bias to be prevalent among educators of children and adolescents (Finn, Seymour, & Phillips, 2020). The attribution theory (Heider, 1958) has been widely tested in the field of weight bias, with perceptions about the controllability of obesity, i.e., whether or not the individual is ‘to blame’ for his/her condition, correlating with levels of weight bias (McClure, Puhl, & Heuer, 2011; Puhl & Brownell, 2003). Findings of this paper suggest a lack of recognition, and perhaps a lack of knowledge among the teachers of the biological underpinnings of overweight and obesity, as teachers attribute adolescent weight and physical health exclusively to aspects of the adolescent’s lifestyle which she and her immediate environment are responsible for. In addition to weight bias, a certain degree of gender bias among the interviewees cannot be ruled out as suggested by the fact that participants considered that adolescent girls did not engage in competitive sports as much as boys due to their less competitive nature. Previous findings (Preece & Bullingham, 2020) have already highlighted the presence of gender stereotypical views including stereotypes on traditional gendered sports among physical education teachers. These stereotypes seem to be sub-conscious and are reinforced through gendered habitus and inculcated within the field of physical education (Preece & Bullingham, 2020). According to our results, this sort of gender bias may also exist among other school teachers beyond those teaching physical education. Future research should explore the prevalence and impacts of weight and gender bias among educators of adolescents from low SES backgrounds.

4.2. Strengths and weaknesses

This study extends on previous literature as the first to examine the extensive barriers to healthy living among this specific and vulnerable cohort of female adolescents from low socio-economic backgrounds in Dublin. Examining this cohort in isolation may guide the designing and development of effective and efficient interventions tailored to their acute needs. Methodologically, all interviews and transcriptions were carried out by the same interviewer, who conducted an initial pilot interview, and adjusted and developed the interview guide accordingly throughout the process. While only nine interviews were conducted, data was efficiently collected until a clear saturation point was met, where no unique information was emerging, and further interviews would be extraneous. Following this, the analytic process was carried out in a collaborative manner by two separate coders. This ensured that the entire dataset was appropriately examined and ensured satisfactory levels of internal validity.

No themes were identified within the public policy level of the SEM. This was probably due to the fact that no specific questions were asked on this topic and, therefore, no information was collected. This issue could have been prevented by already applying the SEM when developing the interviews questions. In addition, the generalizability of these results to wider populations and varying settings requires further study. However, one may speculate that some barriers identified may be applicable to adolescent boys of disadvantaged upbringings, particularly those at organizational and community levels. All themes are likely to be applicable to adolescent females of low SES across Ireland as a whole.

Particularly impactful on the current study was the occurrence of the global COVID-19 pandemic and the subsequent announcement of government social distancing restrictions prior to the data collection. Such restrictions altered the methodology of the study. Interviews had to be conducted online through video calling software, as opposed to the originally planned face-to-face interviews. This may have impacted the ease of communication and building of rapport between the interviewer and interviewees (Weller, 2017). However, it is unlikely that the COVID-19 pandemic influenced the collected data as, at that stage, teachers were not aware yet on how the pandemic was impacting the girls’ lifestyles.

5. Conclusion

Overall, the current study provides novel insight into the factors which impede on adolescent girls’ engagement in healthy lifestyles from a teachers’ perspective, focusing specifically on those from low socio-economic backgrounds. Results presented a range of factors which will be important to address in order to improve the lives of these girls, with opportunities for intervening at a range of different levels, from community level factors to individual level factors. Failing to account for the factors identified in this paper may impede on achieving positive long-term change regarding the health behaviors of younger generations from disadvantaged backgrounds, and subsequently the health of their future offspring. Future research should consider parental views on this topic to obtain a better understanding of this topic from a different perspective.

Declaration of interest

We declare that the authors did not have any personal or financial conflicts of interest.

Author contributions

S.B–S and C.M designed research; R.M. conducted research; R.M. and R.Q. analyzed and interpreted data; R.M. and S.B–S wrote the paper. R. M., R.Q., C.M. and S.B–S. critically revised the manuscript. All authors read and approved the final manuscript. All authors have primary responsibility for final content.

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Data and code availability

Data used in this study are available upon request. The lead author has full access to the data reported in the manuscript.

Ethical statement

The study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving human subjects/patients were approved by the University College Dublin Human Research Ethics Committee (reference number LS-18-69-Bel-Serrat). Written informed consent was obtained from all participants before taking part in the interviews.

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