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Grut, K. ; Mikkelsen, M. L. K.; Nielsen, M. J. ; Thoustrup, T.; Valentin, S. G. ; Ørnbo, L. E.; Mikkelsen, Bent Egberg

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Addressing inequality in healthy eating among young people at vocational schools - assessing stakeholder engagement in a Whole Health & Whole School Intervention

Grut K., Mikkelsen M.L.K., Nielsen M.J., Thoustrup T., Valentin S.G., Ørnbo L.E. and Mikkelsen B.E.
Aalborg University, Copenhagen, Denmark
Contact e-mail: bemi@plan.aau.dk

Key words: whole school approach, inequalities in health, vocational schools, adolescents, stakeholder salience

Background

Social inequality in health is one of society's grand challenges. This is a consequence of different factors such as education and gender, resulting in lower consumption of fruits and vegetables, higher consumption of fat and meat, less physical activity and higher rates of smoking[1,2]. On average, a person with a low SES and a short or medium length education has a shorter life expectancy and a higher risk of developing diseases such as diabetes and cardiovascular disease, compared to other groups[1,3]. Besides this, women generally eat more in accordance with the official dietary guidelines compared to men[1,4]. Hence, there is a need for interventions targeting less advantaged population groups and in particular men with shorter educations. Thus vocational schools, where the majority of the enrolled students are males, could be of high relevance for such interventions[5]. Due to the growing recognition of the connection between health and quality of education and occupation, the vocational schools have shown increased interest in health interventions. The new Danish Vocational School Reform for instance includes an increase in the number of lessons per week, mandatory health and an addition of 45 minutes of mandatory physical activity per day[6,7,8].

As part of the Vocational School Reform, the health intervention 'Healthier Vocational Schools' (HVS) promoting a healthier lifestyle of students at vocational school was initiated. The program uses a Whole Health and a Whole School Approach (WSA), which focus within the areas of diet, physical activity and smoking, with different initiatives in each area[9]. However, to reach high compliance in a setting like a vocational school, the committed support and cooperation of a broad range of stakeholders is essential.

Since vocational schools are multi-stakeholder arenas with numerous spheres, the application of a WSA is advantageous, in order to fully tap the health promoting potential of this setting. The purpose of a WSA is to understand the school as a social system, which is being influenced by environmental factors such as teaching, social climate, physical environment, management aspects as well as external relations. Previous experience with health interventions at schools has proved that interventions seems to work better when: 1) A local and user-involved adjustment of WSA is applied, 2) Focus is placed on improving health instead of avoiding disease, 3) The project is implemented over a longer period of

time, 4) Changes and improvements are made both on a social, physical and political level at the school, and 5) Multiple stakeholders and resources are involved in the intervention[10]. Therefore, it can be speculated that successful promotion of healthy lifestyle at vocational schools requires engagement of a broad range of stakeholders and that health interventions needs to be understood as an implementation and organizational change process, where both contribution as well as costs and benefits are important for all stakeholders in the process.

Hence, this paper takes point of departure in a stakeholder analytical approach where the interaction between the stakeholders is analyzed based on Power, Legitimacy and Urgency as suggested in the PLU model by Mitchell et al.[11].

Aim

This paper aims to examine how the multiple stakeholders at a vocational school could be engaged, in order to create a consistent and holistic intervention within the areas of diet, physical activity and smoking. The aim was further to identify possible barriers, progresses, challenges and opportunities that may have occurred, both on a political, organizational and practical level. Moreover, it was of interest to depict how the experiences from the pilot project can be used in the further development and future implementation of programs on other vocational schools.

Methods

Case Description

In cooperation with Holstebro Municipality, a pilot project was carried out at the vocational school in Holstebro (UCH), on the departments of Auto Mechanics (DAM) and Transport & Logistics (DTL), where the enrolled students are primarily young men at the age of 16-30. This pilot project was carried out to develop and test a best practice model that can be applied at vocational schools in general.

Interviews

A total of six qualitative interviews were conducted in the period from the 24th to the 28th of November 2014 at UCH. In order to obtain comprehensive answers and elaboration of the stakeholders' understandings and experiences, all interviews were constructed based on a semi-structured interview form with open-ended questions[12]. The stakeholders interviewed were the project manager, two members of the school management, two middle managers, four teachers and two canteen managers. The number of questions in the interview guides ranged from 17 to 35 depending on the specific stakeholder. Context specific follow-up questions were used. Questions covered the overall perception of and collaboration within the project as well as the political initiatives taken within the areas of diet,

physical activity and smoking, and how these had been organized and subsequently implemented in practice. Prior to the analysis, all interviews were transcribed and coded using NVivo.

Conceptual Foundation

With a point of departure in a Messy Map by Clarke[13], both human and non-human elements as well as discourses, which may have affected the project, were identified. In order to classify the identified stakeholders' influence and salience in the project, thus who was more prominent, who should be prioritized and who were the potential threats to the project, the PLU model by Mitchell et al.[11] was applied. As an addition to the traditional use of solely human stakeholders in this model, all types of stakeholders identified in the Messy Map were included. Stakeholders were positioned in the model addressing the attributes: Power, Legitimacy and Urgency[11] (see figure 1). A total of four models were created for the analysis and included or excluded different stakeholders depending on the area of focus being either diet, physical activity, smoking or the overall project.

Figure 1. The PLU model (adapted from Mitchell, Agle and Wood[11])
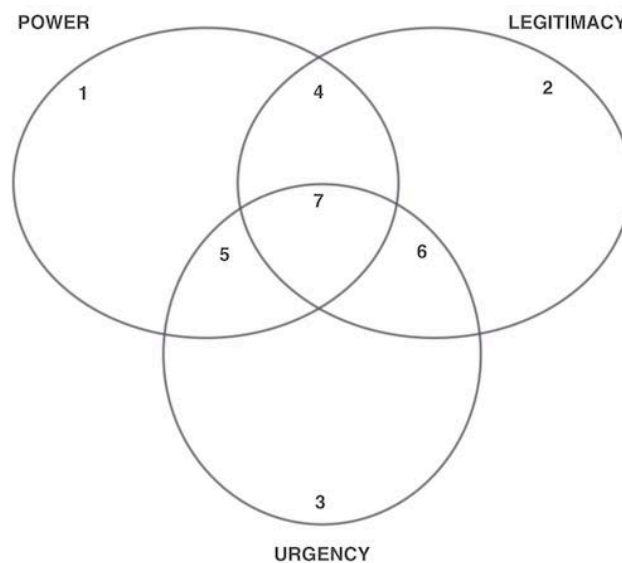
Analytical Matrix

In order to extract knowledge from the PLU models and identify possible barriers, progresses, challenges and opportunities within project HVS, a matrix for the analysis was created (see table 1). The purpose of the matrix was to lead the analysis through the following three steps addressing both the political, organizational and practical level:

1) The initial decision making processes and intentions of what initiatives were supposed to be implemented.

2) The organization of the initiatives concerning who and what was needed and when it was needed for the initiatives to be carried out.

3) The implementation of the initiatives answering how it was carried out.

Table 1. Analysis Matrix

	Political	**Organizational**	**Practical**
Initiatives	Which initiatives have been planned within the project period?	How have the initiatives been organized?	How have the initiatives been carried out?
Stakeholders	How have the initiatives been received by the main stakeholders involved?	How has the organization of the initiatives worked for the different stakeholders?	How has the practical implementation of the initiatives worked for the different stakeholders?
Reasoning	What is the rationale behind the stakeholders' perception of the planned initiatives?	What has and has not functioned for the stakeholders in the organization of the initiatives?	What has and has not functioned for the stakeholders in the practical implementation of the initiatives?

Both in the analysis and discussion of the current status of project HVS, and within the three areas and related project initiatives, the four following key terms used were used. *Barrier:* A circumstance or obstacle that prevents progress. *Progress:* A development (or factor affecting the development) towards an improved condition. *Challenge:* A situation that requires extra attention in order to overcome. *Opportunity:* An advantageous circumstance that makes it possible to obtain something

Findings

Diet

Two different initiatives have been implemented in the canteen of UCH. One was to provide free breakfast every morning, which was organized in cooperation with two major food companies sponsoring the food. The other was the development of different nudging proposals and was to be implemented in and around the canteen. This work resulted in 12 defined initiatives, which on an

organizational level were developed in close collaboration with the two kitchen managers, the canteen staff and an external researcher.

Using the PLU model, the stakeholders found to be of high importance within the area of diet were the canteen staff, the kitchen managers and the teachers. The analysis indicated that the nudging initiative experienced great *progress* and functions on a political, organizational and practical level primarily due to the kitchen managers and canteen staff being involved in the development on the different levels, which opens up new *opportunities*. However, in contrast to this, the canteen staff experienced some *challenges* on a practical level concerning the breakfast initiative. Furthermore, the analysis indicated that it might have been an overall *barrier* that the canteen is an independent business, as they have to take their economy into consideration, limiting the ability to create major changes[14].

Physical Activity

The analysis of physical activity indicated that the political initiative concerning the introduction of 45 minutes of physical activity per day, were received differently in the DAM and DTL. In relation to project HVS, the project manager introduced an initiative where some of the teachers from both departments received courses in "Power Breaks" as a tool to incorporate physical activity in the lessons. These should function as an active break of 5-10 minutes with activities developed in relation to the students' future occupation, and as such could benefit their professional lives. Another part of the initiatives concerning physical activity has been to provide the school with some exercise equipment such as Frisbees, balls and rackets. However, it is unknown to what extent these have actually been used. This may be a consequence of the fact that UCH do not have the physical facilities to carry out the activities.

By using the PLU model, the stakeholders of high importance within the area of physical activity were found to be the teachers from DAM and the teachers from DTL. The analysis indicated that the political initiative of incorporating physical activity in the education was received differently by the two stakeholders. Where the analysis revealed that the DTL experienced *progress* both on an organizational and practical level, it furthermore indicated that the DAM experienced *barriers* at both levels. This may be due to differences within the curriculum, the nature of the profession and willingness from the teachers. On the other hand, the results indicated that both departments experienced *challenges* with the proposed activities in relation to provision of time, lack of proper facilities and professional relevance[14].

Smoking

The policy for smoking at UCH regulates that the students are not allowed to smoke inside the school, though it is still allowed on the premises outside the building. In order to create *opportunities* for affecting the students in a desired direction, the project manager introduced an initiative on a political level. This initiative involved educating two teachers as smoking cessation instructors (Xhale), with the aim of providing smoking cessation courses to the students.

The application of the PLU model to the area of smoking, suggested that stakeholders of high importance were the project manager, the school manager at UCH and the Xhale instructors. The

analysis indicated that the initiative concerning the education of Xhale instructors functioned on a *political* level; however contrary to this, it furthermore indicated that it functioned neither on an *organizational* nor on a *practical* level. Despite the small *progress* of educating the instructors, the results suggested that *challenges* related to time were dominating. Furthermore, the lack of possibility to adjust the smoking policy may hinder major changes at the school, which could be seen as a *barrier*[14].

HVS Program

To implement the HVS program, The Danish Heart Foundation appointed a project manager to be in charge of the communication and facilitate program implementation including its different sub-components. A project description was developed, however the objectives for the initiatives had only been vaguely formulated. Activities included the establishment of a project group consisting of representatives from the school management, the middle managers, and the teachers with the aim of ensuring involvement and support from all groups through project meetings and the establishment of a Health Committee.

The use of the PLU Model, resulted in the project manager, the school management, the middle managers and the teacher being suggested as stakeholders of high importance. The analysis indicated that the *political* initiative, concerning the establishment of both the project group and Health Committee, was regarded a *progress* by the project manager, however none of the stakeholders believed that it worked in *practice*. In general, the interviews revealed that the middle managers and teachers were not fully convinced about the relevance for such a project on UCH. On an *organizational* level, the analysis indicated that all stakeholders felt that decisions were somewhat forced upon them and that participation was involuntary. It is suggested that the lack of involvement and influence has resulted in unwillingness from the teachers to participate in meetings, which has caused *challenges* on a *practical* level. A shared opinion by all stakeholders were found to be the *challenges* and possible *barriers*, which may hinder further *progress*, related to the communication and structure thereof. *Organizationally,* the school management requested a more direct contact between the project manager and the teachers, and *practically* teachers requested that meetings should not be planned too far ahead[14].

Discussion

Based on the analysis, three main themes were identified as being key to implementation success: ownership & relevance, communication & responsibility and time & planning. The discussion revolved around how these themes affected the progress of actions taken.

Ownership & Relevance

The main focus of the school is to provide a professional education within DAM and DTL. In comparison the results indicated that the public health focus of the HVS program is less important for the targeted stakeholders and the setting. Therefore, it was of relevance to address the eligibility of project HVS, and one might question what role health should play in such an educational institution.

The analysis suggested that professional benefits, as a direct result of the intervention, would increase the project eligibility. Additionally, it indicated that relevance and eligibility were linked to the notion of ownership. If the involved stakeholders felt that they had no say in the project or were not being heard, this could explain why they did not find the project relevant, and therefore only felt limited sense of ownership[14].

In the interviews, stakeholders expressed that they to some degree had experienced that a top-down approach were applied and that the program implementation was dictated. This suggests that using a participatory approach would add to program implementation progress and that stakeholders at the lower level should be regarded both as key facilitators but also as important sources of knowledge. In particular the canteen had practiced a bottom up style approach based on participation. Moreover, the canteen initiatives had involved the engagement of an external researcher that had brought in evidence based evaluation and intervention development methods. Together these two aspects created progresses. Furthermore, the analysis suggested that the fact that the canteen staff felt that promotion of good public health nutrition was in line with the core competencies of their profession, quickly positioned them as frontrunners in the implementation process[14]. The advantages of involving research based methods and academia is an important insight from the implementation and should be considered in the future when promoting health in vocational settings.

Communication & Responsibility

Communication and collaboration was additionally suggested as important themes within the project, as well as the way in which assignment of program responsibilities and duties took place as perceived by the different stakeholders. The teachers from the DAM placed the responsibility on the school management, who indirectly placed some of the responsibility on the teachers. Similarly the canteen staff placed the responsibility on the teachers, and the project manager placed the responsibility on the school management.

As mentioned above, there was limited knowledge about the objectives as well as on the assignment of important team roles. In addition, the analysis further indicated that the stakeholders in general had limited insight into precisely what was expected from them. This may have resulted in the situation where stakeholders began pointing at each other in an attempt to place responsibility, leading to some of the stakeholders shirking the responsibility. The feeling of slow progress led to some extent the stakeholders to a passive position waiting for someone else to take action, indicating that the lack of clear assignment of duties and tasks is an important challenge that has to be addressed[14]. Alignment of the stakeholders' expectations in the first steps of the project is suggested as a way to address and possibly overcome this.

When aligning expectations for the project, the concept of success criteria could advantageously be discussed. The project manager stated that a success was not only related to having a measurable effect or implementing a certain number of initiatives, but that the whole process, no matter what, will be a success in itself. It may could have been relevant to communicate this message to the rest of the stakeholders, thereby avoiding frustrations. Opposite, the discussion point towards the risk that this

perspective could create even less willingness to be a part of project HVS, hereby that the stakeholders at UCH would not see any relevance at all.

The results of the study identified that Project HVS used a top-down approach in the decision-making processes and the process of communication, which had its disadvantages. As a result, the stakeholders could easily distance themselves from the project, and miss out on relevant information, which could result in lack of commitment to the project.

Time & Planning

The time frame of planning program implementation meetings and intervention activities also proved to be a challenge. The analysis showed that a thorough understanding of the organizational culture and operational procedure in vocational school is important, in order to create the appropriate frame for the program. Results showed that fitting intervention components and program activities into the short-notice approach used at the school was a recurring issue. Previously, there had been no limit to the time a teacher could invest in the work, but since Law 409 was revived[8], the teachers have a more controlled structure for their work and find it difficult to include physical activity in their schedule. On an organizational level, more emphasis needs to be put on ways of implementing the initiatives that are already present, hence focusing on how, when and who, instead of further development of what could be implemented.

Conclusion

This study investigated the implementation of a Whole Health intervention program at the vocational school in Holstebro, Denmark, and examined the role of the stakeholders involved. The study identified the stakeholders' perception of barriers, progress, challenges and opportunities. This was examined by conducting six semi-structured interviews with the involved stakeholders, then analyzing the data in according to influence and salience within the framework of the PLU model. Importantly, the analysis showed that stakeholder position was context dependent. Therefore, we suggest that the PLU model is used as a tool to analyze and understand the stakeholders' commitment in relation to the different program areas and related initiatives and not in relation to the project as a whole.

The initiatives within the areas of diet, physical activity and smoking as well as the overall project, were analyzed from three different levels; political, organizational and practical. Findings showed that each area met different barriers, progresses, challenges and opportunities, which were divided into the following themes in the discussion: Ownership & Relevance, Communication & Responsibility and Time & Planning.

Overall, the results of the study identified the following factors as being important for consideration: sense of ownership, eligibility, relevance, frontrunners, top-down approach, participatory approaches, responsibility, establishing common objectives and legal/curricular provisions. It is furthermore suggested that these perspectives can advantageously be taking into account on other vocational schools that want to promote health as part of their educational reform.

Acknowledgements

References

1. Forebyggelseskommissionen. Vi kan leve længere og sundere - Forebyggelseskommissionens anbefalinger til en styrket forebyggende indsats. København: Forebyggelseskommissionen; 2009 Apr. 472 p.

2. Darmon N, Drewnowski A. Does social class predict diet quality? Am J Clin Nutr 2008;87(5):1107-1117.

3. Mackenbach JP, Stirbu I, Roskam AR, Schaap MM, Menvielle G, Leinsalu M, et al. Socioeconomic inequalities in health in 22 European countries. N Engl J Med 2008;358(23):2468-2481.

4. Christensen LM, Kørup K, Trolle E, Fagt S. Måltidsvaner for voksne med kort uddannelse 2005-2008. Søborg: DTU Fødevareinstituttet; 2013 Dec. 64 p.

5. Teknologirådet. Fedme som samfundsproblem. Teknologi debat; 2011.

6. Junker S. Overblik – Dette indeholder erhvervsskolereformen. Danmarks Radio [Internet]. 2014 Feb 24 [cited 09 December 2014]. Available from:
http://www.dr.dk/Nyheder/Politik/2014/02/24/220344.htm

7. Larsen JB, Hansen JV. Reform af erhvervsuddannelser på plads. Danmarks Radio [Internet]. 2014 Feb 24 [cited 09 December 2014]; Available from:
http://www.dr.dk/Nyheder/Politik/2014/02/24/211107.htm

8. Moderniseringsstyrelsen. Vejledning om nye arbejdstidsregler for lærere ved institutioner for erhvervsrettet uddannelse, social- og sundhedsuddannelse, almen voksenuddannelse samt arbejdsmarkedsuddannelse. København: Moderniseringsstyrelsen; 2014 Jun. 64 p.

9. Hjerteforeningen. Sundere erhvervsskole Holstebro [Internet]. 2014 [cited 09 December 2014]. Available from: http://www.hjerteforeningen.dk/erhvervsskolesundere_erhvervsskole_holstebro/

10. Nielsen L, Meilstrup C, Nelausen MK, Holstein B, Jensen BM, Thorstainsson HG. Fremme af psykisk trivsel blandt skoleelever: Projektbeskrivelse for Optur 2010-2011. Forskningsgruppen for Børn og Unges Sundhed, Statens Institut for Folkesundhed, SDU og PsykiatriFondens Børne- og Ungeprojekt; 2010.

11. Mitchell RK, Agle BR, Wood, DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. Acad. Manage. Rev. 1997 Oct;22(4):853-886.

12. Kvale S. Doing interviews. London: Sage; 2007.

13. Clarke A., Situational Analysis. Grounded Theory after the Postmodern Turn. Thousand Oaks, CA: Sage; 2005.

14. Grut, KP; Ørnbo, LE; Nielsen, ML; Mikkelsen, MLK; Valentin SG & Thoustrup, T. (2015) The Current Status of Project Sundere Erhvervsskoler Appropriate Fuel for Public Health Interventions? Copenhagen: Aalborg University, Integrated Food Studies; 2015. Supervised by Bent Egberg Mikkelsen