Results Dump

Experts and Teachers Preconceptions

# Method

INITIAL DECISIONS

Thematic analysis decisions, based on (Braun & Clarke, 2006):

**Prevalence:** The theme's prevalence is counted at the level of each individual occurrence across the entire data set.

**Inductive vs. theoretical thematic analysis**: themes and patterns within data are identified in a theoretical way (top-down), grounded in TDF [10.1186/s13012-017-0605-9](https://implementationscience.biomedcentral.com/articles/10.1186/s13012-017-0605-9). However, we will do a first round of coding inductively, then mapping and changing these sub-themes to the TDF overarching themes. We will be careful and reflect on where exactly each sub-theme fits. *If sub-themes seem to fit in multiple TDFs, we will note that.*

Note: when we start from theory, it is hard not to be biased in coding. It is also \*quite\* naïve to consider that themes ‘emerge’ purely from data when the researcher's perceptions always influence the results of thematic analysis (researcher biases). No one codes ‘in an epistemological vacuum’ (I like this expression). We still leave room for unexpected barriers and facilitators that might not fit well in any TDF domain (note to past self: this was not a problem).

**Semantic vs. latent themes:** we will be developing latent themes, going beyond the semantic content of data (explicit meaning), and analyzing the underlying ideas, assumptions, and conceptualizations – and ideologies – that are theorized as shaping or informing the semantic content of data. Creating themes involves interpretation by the researcher.

I.e., we try to go beyond what is said that influences the PA behavior, and try to understand why participants think or feel that each explicit factor influences the PA behavior.

This is why the validation step is so important. Because it will validate the interpretation of the researcher with another round of data collection/ analysis.

**Essentialist/ realist vs. constructionist thematic analysis:** We take the assumption of constructionism, where meaning and experience are socially produced and reproduced, rather than inherited within individuals.

THEMATIC ANALYSIS STEP-BY-STEP (Hey, chatty!)

**1. Familiarization (Done!)**

• Action: Transcribing data (if necessary), reading and re-reading the data, and noting down initial ideas.

• Goal: Gain a deep understanding of the data and start noting initial ideas.

**2. Coding (Done inductively)**

• Action: Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.

• Tools: Use qualitative data analysis software like NVivo, ATLAS.ti, or manual coding with spreadsheets.

• Goal: Identify patterns and key points related to barriers and facilitators of physical activity.

**3. Searching for Themes (Second round of coding done! Mapping to the TDF domains)**

• Action: Collating codes into potential themes, gathering all data relevant to each potential theme

• Goal: Develop initial themes that represent the barriers and facilitators.

**4. Reviewing Themes (Done, found 3 extra themes)**

• Action: Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.

• Goal: Ensure themes accurately reflect the data.

**5. Defining and Naming Themes (Done with theory mostly)**

• Action: Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.

• Goal: Create a clear and organized thematic map.

**6. Writing Up (Mostly done, come on)**

• Action: The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

• Goal: Present a coherent narrative that explains your findings.

NOTES ON SOFTWARE AND AI TOOLS

**For transcription:** used word for English and AWS for Dutch (Word sucks to transcribe from Dutch and I could not help either).

**For coding:** used NVivo, priceless.

**For writing up:** used the data extracts from NVivo automatically generated, Copilot and my notes taken while coding.

Prompt used:

*I am researching the barriers and facilitators to physical activity. I am using the TDF framework of health behavior sciences. I interviewed experts and teachers about the barriers and facilitators of a population. Summarize concisely the barriers and facilitators related to {THEME}. Use only the attached data. For every barrier and facilitator give a short summary and a quote from data. {FILE.docx}*

# Prevalence of Themes

A screenshot of a computer screen

AI-generated content may be incorrect.

|  |  |  |
| --- | --- | --- |
| **Name** | **Files** | **References** |
| **TDF environment context and resources** | **12** | **263** |
| school | 10 | 80 |
| school resources | 8 | 21 |
| school sport opportunities | 6 | 16 |
| school support to connect students to external sport opportunities | 5 | 13 |
| commuting to school | 5 | 11 |
| school health policy | 6 | 9 |
| school practical lessons and internships | 2 | 6 |
| school surroundings | 3 | 4 |
| outside school | 10 | 62 |
| sports club | 6 | 29 |
| neighbourhood coach | 7 | 23 |
| urban vs rural areas | 4 | 7 |
| policy and programs | 9 | 47 |
| time | 11 | 40 |
| after school hours | 11 | 25 |
| during school hours | 4 | 15 |
| family financial resources | 11 | 34 |
| **TDF social influences** | **14** | **176** |
| social support from family | 9 | 49 |
| modelling | 9 | 45 |
| social support from coach and teachers | 6 | 29 |
| social support from friends (relatedness) | 10 | 24 |
| group norms | 5 | 14 |
| social norms of gender preferences | 4 | 10 |
| alienation | 3 | 5 |
| **TDF knowledge** | **10** | **57** |
| health knowledge (literacy) | 8 | 33 |
| procedural (knowledge of the system) | 6 | 24 |
| **TDF skills** | **7** | **50** |
| TDF psychological skills | 6 | 30 |
| interpersonal skills | 5 | 17 |
| cognitive skills | 5 | 13 |
| TDF physical skills | 5 | 20 |
| skills and skill development | 5 | 20 |
| **fun** | **8** | **30** |
| TDF goals | 4 | 23 |
| distal and proximal goals | 4 | 17 |
| goal setting | 3 | 6 |
| **TDF beliefs about capabilities** | **6** | **22** |
| self-efficacy, self-esteem, and independence | 6 | 20 |
| **TDF beliefs about consequences** | **5** | **18** |
| outcome expectancy (health impact and body image) | 5 | 12 |
| consequences (being seen) | 1 | 2 |
| **TDF emotion** | **4** | **16** |
| fear | 4 | 10 |
| shame | 3 | 4 |
| disgust | 1 | 2 |
| **TDF reinforcement** | **6** | **16** |
| incentives and rewards | 5 | 9 |
| enforcement | 3 | 6 |
| reinforcement | 1 | 1 |
| **autonomy** | **4** | **15** |
| **TDF social role and identity** | 4 | 14 |
| social identity | 4 | 8 |
| identity | 4 | 6 |
| **TDF memory, attention, and decision process** | **6** | **13** |
| attention | 6 | 10 |
| cognitive tiredness | 2 | 2 |
| memory | 1 | 1 |
| **TDF behavior regulation** | **5** | **13** |
| routines and habits | 3 | 8 |
| action planning | 4 | 5 |
| **TDF intentions** | **5** | **13** |
| intentions | 5 | 13 |
| **competition** | **6** | **12** |

# Detailed Results Dump

Not in prevalence order…

|  |  |  |
| --- | --- | --- |
| **TDF Domain** | **PA Barriers** | **PA Facilitators** |
| **Knowledge**  An awareness of the existence of something  *Constructs:*  Knowledge (including knowledge of condition/scientific rationale)  Procedural knowledge (Knowledge of task environment) | ***Health and PA Knowledge***  > Low health literacy.  *“When they drink a liter of Coca-Cola, they don't understand what that means for their body.” Expert-1*  > Lack of understanding of the importance of a healthy lifestyle due to not having any health issues in the present and not seeing any immediate health benefits.  *“So why would I be worried for getting healthy in the future? “ – Expert 5*  ***Procedural Knowledge***  > Lack of knowledge about the society and sports system (e.g., how to sign up to a sport club, how to get transportation, how to access available fundings to participate in sports)  *“Our system is very difficult for our students. (...) They don't have a clue about policies" – Expert 1*  *“They don't know how to sign up and all that.”*  > Lack of knowledge of enjoyable sports options.  *"They just don't really know which sports are there. So they have to get acquainted with many different sports to also find out what they like and what really fits with them..." – Expert 2*  *>* Sport organizations aim at fidelization of students to a single sport.  *“And what what you see in over our sport is that all the clubs want to keep them in their club so they don't collaborate with other clubs to do different things.” – Expert-8* | ***Health Knowledge***  > Tailored content promoting health literacy to the group and to the individual.  *“If you were to educate someone on strength training and they know nothing about it compared to someone who's already done it before, or if someone really likes visual content compared to someone who likes reading. (...) So we tackle the different dimensions of personalization” - Expert-11*  *“You can, uh, profile the demographic up front, so if you have a program mainly for our young people, you know they probably short texts, more visuals.” – Expert 11*  > Learning through storytelling.  *“Make it into a story so that they will want to absorb, yes, the information. (...)They knew everything about without with just one experience, so they would remember more than former traditional lesson.” – Expert 12*  > Using accessible digital tools.  *“If you have it digitally then umm, it's accessible for everyone.”- Expert 12*  ***Procedural Knowledge***  > School involvement in connecting adolescents to sport opportunities  *“School makes it on its own. School does bring you into contact with sports.” – Teacher-8*  *“The the students, you mean take them by the hand and show them how nice it is because they're well, kids that age are really reluctant to do stuff by themselves, so you need to take that and show them the benefits. There should be basically that they don't.*  *Often don't know the way around, so you need somebody.” – Expert-10*  > Programs that support access to more than one sport without a strong commitment  *“you see more and more within the, the, the, the generation that's there now they don't want to focus on one sport.” – Expert 8* |
| **Psychological Skills**  An ability or proficiency acquired through practice  Skills  Skills development  Competence  Ability  Interpersonal skills  Practice  Skill assessment | ***Cognitive skills***  > Struggle to understand complex sports and instructions compared to others  *“Everybody is better than them... the rest is smarter. (...) Most of them 80 or 90% need more time to do something to know something."– Expert-7*  *"Then they are often the misfits (...) because they don't quite understand the game tactically or don't understand the rules” – Teacher-7*  ***Interpersonal skills***  > Some lack the necessary social skills to engage in group activities.  *“They are just not skilled enough to be social” – Teacher-8* | ***Cognitive skills***  > Using simple language can help understanding sports and instructions  *“You have not to do very big words. Short sentences and do it and everything is alright." – Expert-7*  > Repeating instructions and exercises and breaking down into smaller steps can help understanding.  *“A lot of repetition” – Expert-5*  ***Interpersonal Skills***  > Developing social skills within physical education, in a safe environment, can help the adolescents better navigate group dynamics and simultaneously increase PA participation.  *“If you want to integrate social learning within physical education, then you need a safe spot climate.” – Expert-8*  > Individual sports may be an alternative for students who struggle with team dynamics and social interactions.  *"Boxing is more individual... you don't have to take the others into account." – Teacher-7* |
| **Memory, Attention, and Decision Process**  The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives  Memory  Attention  Attention control  Decision making  Cognitive overload/tiredness | ***Attention***  > A shorter attention span makes it difficult to focus on physical activities (or on acquiring PA/health knowledge or listening to instructions) for extended periods of time.  Students seem to be vulnerable to distractions from PA, incl. mobile phones, social media and TV.  *“There's a lot of distraction, of course also from the social media.* *“Digital things that they're, yeah, they're just doing things with. “ – Expert-2*  > The initial interest in PA fades faster over time.  *“I think it's difficult for them to focus and to I think the sport is nice, but I don't know then about 3 months. So they have the focus now on in on something but... Ah. Two weeks, 3 weeks and then OK, it's not so funny anymore.” – Expert-7*  ***Cognitive tiredness***  > Students struggle to concentrate more later in the day and feel tired after school hours.  *“They get tired. (...) Would you put students from here at two o'clock in the afternoon still [doing a test]? Then you will see significantly fewer results. So they're just yes, rather tired or dropped out or eh.” – Teacher-7*  ***Memory***  > Lower capability to remember sports rules and tactics.  *“The average sport is also just a matter of remembering things. a certain tactic.” Teacher-6* | ***Attention***  > Restricting the use of mobile phones during school hours seems to encourage PA during breaks.  *“Since last year we forbid having the mobile phones during school time... Instead of using their mobile phones during the breaks, they're now screaming and running around”* |
| **Behavioral Regulation**  Anything aimed at managing or changing objectively observed or measured actions  Self-monitoring  Breaking habit  Action planning | > Lack of early PA habit formation: Adolescents who did not engage in PA early finding it changing to break the sedentary lifestyle.  *"If you've never exercised, then you're probably not really going to do that now."* | > Structured programs, such as daily PA in schools, helps in establishing regular exercise habits.  *“We have a new program on school from the first years 12 years old, that every day they are going outside for 30 minutes. (…) They have to be active.” – Expert-7*  > Regularly scheduled and small activites helps forming and maintaining PA habits.  *"Because then indeed it's normal to go to the soccer club twice a week... and then it's just a routine and you're used to it."*  *"We've coined something called a micro habit based approach... each of the lifestyle medicine recommendations... broken down into tiny containers or modules."* |
| **Physical Skills**  An ability or proficiency acquired through practice  Skills  Skills development  Competence  Ability  Practice  Skill assessment | > Adolescents who do not engage in sports from a young age often struggle with developing basic skills, making it harder to participate in PA later in life.  *"They are not used to engaging in sports already from a young age. Then it continues to be harder for them because they are not used to throwing and catching the ball." – Expert-5* | > Practice and repetition helps adolescents develop physical skills.  *“And a lot of repetition.” – Expert-5* |
| **Social Influences**  Those interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviours  Social pressure  Social norms  Group conformity  Social comparisons  Group norms  Social support  Power  Intergroup conflict  Alienation  Group identity  Modelling | ***Alienation***  > Some drop out of team sports because they feel alienated due to their perceived lower cognitive abilities compared to peers.  *"They sometimes drop out because they don't feel well. Or get a little teased that they're less smart. (...) You see with football, after a few years it stops. Because all their teammates are always smarter and they get it. Then they are sometimes bullied a bit. Yes. And then they're going to stop sooner anyway." Teacher-1*  ***Social norms related to gender***  > Sports opportunities are often oriented towards boys, making it less appealing for girls who may have different PA interests and prefer not to participate together with boys, such as dancing.  *"One of the main things within our Dutch sport area is that it is boy-oriented. It's men-dominated." – Expert-8*  ***Group norms***  > When the norm within a friend group, family or larger circle (e.g., neighborhood) is disinterested in sports, it is challenging to act outside that norm.  *"The norm in general is we don't like sports. And then it's very hard. And if you do have an interest for sports, then it's quite hard to make that known." – Expert-5*  ***Modeling***  > If adolescents do not see PA being practiced in their immediate surroundings, they are less likely to engage in it. This PA behavior modeling, may come from friends, family, and anyone in the community around them (e.g., teachers at school, coaches at sport clubs).  *"And if you don't get the stimulus of your surroundings or it's not common to go for a walk or sport on your own, then they don't have like a good practice. They see someone doing it." – Expert-3*  > Social media may provide opportunities to access to positive role models.  *"He is follow[ing] a certain influencer, and then it's like a really supportive influencer. That can sometimes be a motivation to start." – Expert-5*  ***Social support from family***  > Parents’ lack of support or involvement in PA can hinder participation.  *“If the parents say, yeah, it’s not important and I don’t support it, then it’s really hard for the kids sort of to go on a weekly basis.” – Expert-10*  > Lack of support from families might be due to not prioritizing PA in the presence of financial urgencies.  *"It's financial, it's social, it's psychological... there are often a lot of more important, more urgent issues, rather than getting your kid to the Sports Club." – Expert-10*  > It may also be due to lack of knowledge of the PA health outcomes and procedural knowledge.  *“you have also educate the parents why it’s necessary for their children to participate in sport because they don’t know and they don’t know what’s best for their children, why it’s best for their children.” – Expert-8*  > The fear of letting these kids participate in unknown activities in unknown environments may also be a barrier.  *“they can have also their own fears about. Letting their Childs going into sports because that can be happening. Bad things. And they they don't allow them to go into sports participation.” – Expert-8*  > Practical issues such as transportation and time constrains can also be difficult to parents, especially in families with financial difficulties. This is particularly relevant in Sport Clubs where parents are expected to volunteer their time to support the Clubs (e.g., helping with transportation, participating in activities, etc).  *"If you don't have a car, then for the kids and for the parent, that already feels... mentally, I think, also hard." – Expert-5*  > Parents of these adolescents may also feel segregated from other parents in Sport Clubs due to their kids disability.  ***Social support from friends (relatedness)***  > These adolescents often struggle to connect with peers at school and especially at sport clubs, laking relatedness. It seems that the social network of these adolescents is small.  *"One barrier into going to the Sports Club is that they don't connect with the people there... the children with. In the team, they are not nice to each other because we know that a lot of bullying happens within the team" (Expert-8).*  > Friends who are not interested in sports can emotionally discourage participation.  *"If they are supportive, then you are going to do some sport. If they aren't, then... it doesn't matter if they have friends in or outside of school" (Expert-7).*  ***Social support from teachers and coaches***  > Coaches often lack training to work effectively with adolescents with special needs, particularly in creating a safe sports environment. Additionally, many coaches at Sport Clubs are volunteers, leading to inconsistencies in the quality of support provided.  *"They are not trained within our education system. Because nobody studies for neighbourhood coach, it's something you do after your study or physical education or after your sports management." "They don't understand that they should watch the group dynamics and intervene when something goes wrong." – Expert-8* | ***Social norms related to gender***  > Including activities that cater to girls’ preferences may facilitate interest.  *"The youth worker I know, they sometimes do workshops on dancing with the girls." – Expert-3*  ***Group norms***  > When the norm within a friend group, family or larger circle (e.g., neighborhood) is interested in sports, then it may motivate individuals to participate.  *"If the norm in the friend group is we like sports, then everyone is like sports and there cannot be exceptions." – Expert-5*  ***Modeling***  > Positive and active role models promote participation.  *“I think seeing movement is moving” – Teacher-7*  *"When they see more and more classmates who are indeed kicking a ball around in the schoolyard... Then you quickly tend to participate." – Teacher-7*  > Female role models may be relevant for girls  *"Especially for girls, also have female coaches that are a model for the girls to stay in and come in because they are related to girls." – Expert-8*  ***Social support from Family***  > Educating parents about the benefits of PA and involving them in programs may facilitate their informed support to the adolescents.  *"An adaptation program for parents would be a very good idea... for stimulating sports participation." – Expert-8*  *Parents of these adolescents can help overcome barriers and improve inclusivity in Sport Clubs.*  *"There are always parents with special needs kids... they organize all kinds of things and mobilize energy within the club." – Expert-8*  ***Social support from friends (relatedness)***  *> PA seems to be more appealing when they involve friends.*  *"They do it because it's fun and because the friends are participating. That's a drive" (Expert-3).*  ***Social support from teachers and coaches***  > Establishing a connection with the adolescents and a safe sports environment is a crucial role of the coach to support PA.  *"You need to understand them and create this caring and safe climate before he can do anything with the physical education part." – Expert-8*  > Focusing on the adolescent’s needs and development rather than just the sport itself can improve the outcomes.  *"Child centered Coach is how do you help them through sports? So sports not target. The children children are so they are in, they are centered and not sports." – Expert-8*  > Implementing specialized training programs for coaches and teachers can improve their ability to support adolescents with special needs.  *"Create a module or training for the knowledge part of these neighborhood coaches so they can be in their role." – Expert-8* |
| **Environment context and resources**  Environmental stressors  Resources/material resources  Organizational culture/climate  Salient events/critical incidents  Person × environment interaction Barriers and facilitators | ***PA Environment at School***  > The physical nature of practical lessons at the school means that the students are engaging in more PA during the day compared to TDP attending theory lessons all day. This is even more critical in the later years, when students are doing internships which require movement during many hours of the day. *"Practical teaching is already very physical in terms of internships and stuff. They really have to work all day." – Teacher-1*  > Students who live far from school, especially in rural areas, face challenges in commuting actively.  *“Not all students could go to school by bike (...) they have to use the bus or car.” – Expert-3*  >There is a significantly increased use of e-bikes, which removes a convenient way of PA.  *“I see a lot of since last year I see very much and a lot of fat bikes parked downstairs and a... and a lot of E bikes.” – Expert-1*  > Schools lack the human resources to support PA initiatives during the breaks and after school hours. Most teachers already have a high workload and also need a break between teaching responsibilities.  *“Teachers need a break too” – Expert-1*  > Schools may also lack the equipment and facilities for PA initiatives.  *“For example, we also had a fitness room upstairs.(...) But now that it has become a classroom, it is no longer allowed. We also make it more difficult.” – Teacher-7*  > Schools often lack policies and dedicated staff to support PA, making it difficult to sustain initiatives.  *"Without policy, you see it's really depending on a specific person and when the person leaves, it falls down again." – Expert-9*  ***PA Environment Outside of School***  > Especially in rural areas, there is a difficulty in accessing sport clubs due to the distance and lack of transportations options which are left for parents to resolve.  *"They experience quite a big barrier to start with sports because of the distance, because they have to arrange getting to a Sports Club."*  > Even considering inclusivity initiative in sport clubs, it may not be the right place for these adolescents.  The government centralizes a lot of funding in Sport Clubs, when school initiatives might be more appropriate for this target group.  *"For a lot of kids, the Sports Club is not the place for them. So I think what we should do is really look at other ways of being physically active that suits them more." – Expert-5*  ***Family financial resources***  > Families with limited financial resources often prioritize basic needs over PA  *“Their primary focus is on getting up in the morning, getting food on the table, work per week, so getting an income and then sports and physical activity is, yeah, not a priority for most.” – Expert-5*  > The costs associated to PA participation (e.g., membership, equipment, transportation) can be prohibitive for families with limited financial resources.  *“If you don’t have a car, then for the kids and for the parent, that already feels... Maybe also that they’re ashamed for it, because then or they cannot drive, or if they can’t drive, they have to rent a car.” Expert-5*  > The need to provide financial documentation to access public subsidies can deter families from applying.  *“It was a big barrier for parents that they needed to show their finances.” – Expert-5*  > Older adolescents may need to work part-time jobs help provide for their family,  *"If you have a part-time job and sports, that's too much, because then they can't chill anymore." – Teacher-1*  ***Time***  > After a tiring school, adolescents appreciate having their own leisure time and prefer to relax rather than engage in PA.  *"When the school is out, they want to go. They want to chill in the neighborhood." – Expert-7*  *"It should not take their leisure time." – Expert-9*  > Older children may also have a parti-time job, competing for time for PA.  *“If you have a part-time job and sports, that’s too much, because then they can’t chill anymore.” – Teacher-1*  > The scheduled of organized sports might be too rigid for adolescents who prefer flexibility.  *"Everything that's in the strictness of organized sport is also driving them away." – Expert-8*  ***Policy***  > Focusing only on change on the individual level is likely to fail. A system change is required, but implementing multi-layer approaches involving multiple stakeholders is challenging.  *"It's a complex multi-layer approach and only targeting kids or only targeting policy... I would strongly recommend against just that." – Expert-10* | ***PA Environment at School***  > The physical nature of practical lessons and internships means that adolescents are quite fatigued at the end of the day, even though this daily PA may not be enough to meet the PA guidelines. Fatigue may hinder them for participating in PA in their leisure time.  *“Students who do an internship in the hospitality industry three days a week have been walking a lot all day. They really don’t feel like doing anything in the evening.” – Teacher-7*  *> PA initiatives integrated into the school schedule, in the school playground or surroundings, such as recess sports or daily PA, can increase participation, especially because the adolescents tend to prefer moving to being still in a theory lesson.*  *“the students during the break time, they really like to go outside really like to get loose of their energy.” - Expert-3*  > Integrating PA into the school health policy can make it easy to involve teachers and sustain programs, where government funding is essential (e.g., gezonde school program).  Schools who reach out to neighborhood coaches help connect the adolescents to sport opportunities outside the school environment.  *"40% of the schools say they have a connection with the coaches." – Expert-6*  ***Family financial resources***  > Programs who provide subsidies for sport participation for people with a low financial resources.  Programs that facilitate transportation to sport facilities.  *“Sometimes clubs also organized the transportation” – Expert-8*  ***Time***  > PA programs integrated into the daily school schedule can ensure regular participation.  *"Every day from 10:00 to 10:30 we're going to walk around the school and everyone has to join." – Expert-5*  > PA organized at school during school hours or immediately after seem to be more convenient and accessible.  *“*[*That's much easier for them because then they they are already at school, so once they go home, this threshold gets bigger.*](https://tuenl-my.sharepoint.com/personal/m_i_da_graca_jorge_da_silva_ribeiro_tue_nl/Documents/Transcribed%20Files/Video%20Project%202.mp4)*” – Expert-2*  > Commercial sports and fitness facilities might offer flexible timing to older adolescents.  *"You see that also the other organized sports like the more the commercial ones or the fitness one that creates opportunities for the older children because they can come in when it fits them." Expert-8*  ***Policy and programs***  > Local sports services and programs can provide structured opportunities for PA (e.g., youth workers, neighborhood coach, JOU).  *"You have these local sports services... committed to getting people more active in the neighborhood." – Expert-10*  > Commitment and financial support from local governments and schools is crucial for the support of PA programs.  *"You need local networks in order to make it work. (...)the local government is involved because of the finances, the funding." – Expert-10*  *"Creating active schools... a multi-level approach where they tried to get all the stakeholders involved." – Expert-10*  *"A local organization and foundation that says, well, we take care of that because we support the mission." – Expert-10* |
| **Reinforcement**  Rewards (proximal/distal, valued/not valued, probable/improbable)  Incentives  Punishment  Consequents Reinforcement Contingencies Sanctions | > Forcing individuals top-down to participate in PA without their input can be counterproductive.  *"Forcing them to is the big not to do." – Expert-5*  > Obligatory participation and pressure to engage in PA can demotivate adolescents.  *"What will not work? Yes. Guess I guess yeah. Obligation or pressure or." – Expert-1* | > Providing opportunities for small successes can increase motivation.  *"It's important to have smaller steps. So they get more success experiences even though it was a small step." – Expert-5*  *“They need positive feedback or positive input” – Expert-1*  > Allowing students choose their activities voluntarily can enhance motivation. *"If they can choose and it's voluntarily? Then it's not something I'm telling them you have to do this. You have to do that." – Expert-1*  > Offering rewards for participation can be motivational. *"Sometimes a compliment or the fact that they achieved a challenge is the reward in itself. And sometimes it's, they can choose." – Expert-1*  > Mobile application and gamification can support positive reinforcement of PA participation with challenges and rewards that may even contribute to other health behaviors.  *"It's a health application, so you count your steps and you get coins for that. And with the coins you can buy nice healthy stuff again." – Expert-9* |
| **Emotion**  A complex reaction pattern, involving experiential, behavioral, and physiological elements, by which the individual attempts to deal with a personally significant matter or event  Fear  Anxiety  Affect  Stress  Depression  Positive/negative affect  Burn-out | > There is **fear** of joining sports clubs or PA activities due to perceived lack of skills and being judged by others.  There is fear of navigating unknown experiences and environments.  *“most of them are afraid to go everywhere”- Expert-7*  > There is **shame** related to not being as skilled as TDF in the same age groups. There is shame in not wanting to be seen by other exercising.  *“(...) they are ashamed (...) You're so aware of of the people around you and what they might think of you (...)*  *all kids have some doubt on how good they are and how how does it look when I run, how does it look when I throw?”- Expert-5*  > There is **disgust** with sweating in public and the inability to shower after PA. *“Students didn't want to. No, ma'am, because then I'm going to sweat. “*  *Teacher-7* | (see Fun) |
| **Social Role and Identity**  Professional identity  Professional role  Social identity  Identity  Professional boundaries  Professional confidence  Group identity  Leadership  Organizational commitment | > If the prevailing social/group attitude is negative towards sports and participation in PA is low, this social identity discourages participation.  *"The norm in general is we don't like sports. And then it's very hard. And if you do have an interest for sports, then it's quite hard to make that known. (...) So if the norm in the friend group is we like sports, then everyone is like sports and there cannot be exceptions.” – Expert-5*  > Adolescents who perceive themselves as not being a ‘sportive person’ or feel weaker may avoid participating in PA.  *"If you're good at sports, you remain fanatical and active. But if you just can't do it right or feel weaker, you look for ways out." – Teacher-8*  *"Students who don't feel they fit in a team or aren't good at sports often avoid participating because they feel weaker or less capable."* | > Similarly, if the prevailing attitude towards sports is positive, the social identity promotes participation. |
| **Beliefs about capabilities**  Acceptance of the truth, reality or validity about an ability, talent or facility that a person can put to constructive use  Self-confidence  Perceived competence  Self-efficacy  Perceived behavioral control  Beliefs  Self-esteem  Empowerment  Professional confidence | > Low self-efficacy related to PA and in general.  *“I think lack of self-confidence” – Teacher-6*  > Past negative experiences and failures related to sport and education (associated to enrolling in PrO school or being reassigned to a PrO school after attending other levels of education).  *“A lot of our students had a lot of disappointments during their school career...” – Expert-1*  > Low self-esteem related to body image.  *“All kids have some doubt on how good they are and how it look when I run, how does it look when I throw?” – Expert-5* | > Providing successful sports experiences through scaffolding.  "It's important to have smaller steps so they get more success experiences even though it was a small step."  > Encouraging a positive sports approach.  “they think “ohh, but my body ... I can do do this” so that the positive attitude that you can all do all kind of things.” – Expert-8 |
| **Intentions**  A conscious decision to perform a behavior or a resolve to act in a certain way  Stability of intentions  Stages of change model Transtheoretical model and stages of change | > Difficulty in sustained intention to participate in PA  *"They have the focus now on something but... Ah. Two weeks, 3 weeks and then OK, it's not so funny anymore." – Expert-7* |  |
| **Goals**  Mental representations of outcomes or end states that an individual wants to achieve  Goals (distal/proximal)  Goal priority  Goal/target setting  Goals (autonomous/controlled)  Action planning Implementation intention | > The difficulty in understanding the importance of PA in the long term and the focus on more immediate benefits (which might lead to conflicting behaviors like vaping, eating fast food, and scrolling on the phone), makes it hard to keep a mental representation of the distal PA health outcomes (i.e., distal goal). Even if health outcomes are known, but seem to not be prioritized.  *“The biggest challenge is to uh, incorporate it in their lives and give it a meaning for them for the longer term.”- Expert-1*  *“They yeah, indeed, they they do know the health benefits, but it's but it's not a priority. And and I think and that's even more for the praktijkonderwijs than for the VMBO that looking in the future is is very difficult. So they they are not interested in sports today.” – Expert-5* | > Emphasizing short-term benefits like feeling stronger and more energetic.  *“Finding goals or targets that people have short-term benefit from, I feel stronger. I feel more energetic.” – Expert-11*  > Setting short-term challenges might be a better way to set goals, in alignment with the idea of small, achievable success experiences in PA.  *“A challenge that ends within a week or in a couple of days to begin with.” – Expert-1*  > Personalizing goals to individual needs and preferences.  *"There are different ways to personalize content... in terms of goals, so if I need to be more active, how much more do I need to move?" – Expert-11* |
| **Beliefs about consequences**  Acceptance of the truth, reality, or validity about outcomes of a behavior in a given situation  Beliefs  Outcome expectancies  Characteristics of Outcome Expectancies  Anticipated regret  Consequents | > Adolescents do not easily grasp or expect the long term health outcomes of a sedentary lifestyle.  *"They don't experience health problems. So that's not their motivation, I guess, to be physically active." – Expert-1*  > Beliefs that their appearance might be judged by others while engaging in PA.  *“Kids don't like to exercise outside on the playground because then they can be seen by a lot of others.” – Expert-6* |  |
| **Fun** | > Lack of self-efficacy or skills might be a barrier to having fun through PA. | > Activities that are designed to be fun and social rather then competitive or performance oriented can increase the enjoyment and participation in PA.  *“They do it because it’s fun and because the friends are participating.” – Expert-1*  > Introducing new and creative activities, such as augmented reality games (e.g., magic trails project) or mixed sports (e.g., Shuffle sports project), can make physical activity more appealing. Digital tools may support these activities.  > “Pokémon Go, it's a very nice example." – Expert-9 |
| **Competition** | > Many adolescents feel pressure by structured competition, while most organized sports focus on competition and performance. Competitive sports can exclude children who are not as skilled or competition-oriented, leading to drop outs.  *"Sports includes that sport also excludes...sports is healthy, that's sports is also unhealthy." – Expert-8* | > More skilled and high self-efficacy adolescents might be motivated by competition with other.  > Creating a team-based competitive environment, rather then individual-based, may foster motivation with a lower individual pressure. |
| **Autonomy** | > Mandatory PA like PE lessons can demotivate students.  *"If it's voluntarily... then it's not something I'm telling them you have to do this. You have to do that. You have to participate. No, it's up to themselves."*  > The inflexible schedule of organized sports and the strict coaching style oriented to sport performance can cause drop outs.  *"Everything that's in the strictness of organized sport is also driving them away. But they still like activities."*  *"A lot of children drop out in sports... because the coach doesn't coach in a way that fits the development of the child cognitively or socially."* | > Allowing students to choose their own sports and PA can increase interest and participation. This extends to the planning and execution of activities.  *"They really involve the students, like in creating the activities and the things that they do."* |

# Takeaways

* There is alignment with literature.
* I noticed a big emphasis on factors related to a cofounding factor: the overlap of adolescents with mild ID with a population of a low socioeconomic background.
* The prevalence of factors related to the environment and social context is higher, compared to individual factors.
* Three themes/ factors emerged that are difficult to map to only one TDF domain: fun, autonomy and competition. If mapping to only one TDF, I would say:
  + Fun: emotion (joy)
  + Autonomy: reinforcement (opposite to enforcement)
  + Competition: social influences.
* In pointing out facilitators to PA, experts and teachers give possible directions to the intervention options.