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INST FÖR KOST- OCH IDROTTSVETENSKAP

DIETARY SUPPLEMENTS, DO OR DON'T? A MEDIA AUDIT OF THE SWEDISH DEBATE ON DIETARY SUPPLEMENTS FROM A COACH PERSPECTIVE

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Abstrakt

Title: Dietary supplements, do or don't? – A media audit of the Swedish debate on dietary supplements from a coach perspective

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Tränare måste vara beredda på alla frågor de kan tänkas få av sina adepter. Kosttillskott kan på många sätt verka vara en enkel lösning på en idrottares problem i vardagen. Syftet med denna studie är att kartlägga media debatten kring kosttillskott. Detta genom en kvalitativ innehållsanalys och med hjälp av Jönsons (2010) analyschema (Jönson, 2010). Resultatet blev att debatten är spretig och visar på flera problem med kosttillskotten, samtidigt som ett antal olika aktörer talar för och emot användandet av dem.

Studiens slutsats sammanfattas där med som att trots flera aktörers inblandning finns ingen tydlig lösning på problemen, trots att debatten kommit en bit på väg mot att medvetandegöra att det finns ännu olösta problem kring kosttillskott.

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2. Introduction

2.1 Background

Coaches need to be prepared for all the questions their mentees might have for them. One big part of being an athlete is to eat the right things and with the right proportions to earn as much as possible from your training, of course along with other variables. Coaches need to know what these proportions are and what the athlete needs more or less of in his or her diet. Depending on what level the athlete is at in sports the diet is more or less important. For athletes at elite level it can mean the difference between being an elite athlete and maybe just wanting to be one. For athletes a good diet can help achieving the goals of becoming a professional or top athlete. The importance of eating enough and on the right times during a day is one of the difficulties with diets for elite athletes and might be the difference between winning and not participating due to sickness or bad shape. For both elite athletes and young athletes, supplements may sound like a way to make life, training and getting better so much easier.

Commercials tell the consumers about easy ways with no side effects or negative outcomes. Dietary supplements (DS) sounds like and might be an easy way to being healthy, get fit or slim, getting more out of training or just help achieving goals faster but as a coach of athletes you have the responsibility to both know what they contain and make sure that it is secure for the athlete to use the pills, powders or the liquids.

DS and the sometimes-unknown effects of the supplements are currently being discussed in media. Understanding what is being said and what is not being said is important to professional coaches and future coaches as well as students and other people with an academic interest. A media debate might have consequences at different levels, such as better controls or new laws on what is legal to use or not, for athletes as well as everyone who just does a small amount of training or exercising. For coaches the consequence of the debate might be that it gets easier to have control of what product might be helping some athletes, or on the opposite that it is not safe to use DS for any athletes. People with an academic interest could find the debate useful to supplement both existing and future research on the subject of DS.

When supplements are being discussed in media one of the problems is that the Swedish counties are responsible for checking the supplements table of content (TOC). That however does not mean that it is safe taking them or even that the TOC are correct or true. In some cases different substances have been found even though they were not listed in the TOC. What many individuals do not know is that the counties often do not check the supplements

actual content or effects due to not having the resources to do the checks that they should. Another problem is that the producers advertise their products as miracle products when really the content might have no physiological effects but only a placebo effect. On the other hand some people in the fitness industry say that supplements can help athletes to recover better and faster or make the training more energetic and in that way better and give better results. At the same time some of their colleagues mean that supplements are just a way to spend a lot of money and that food is better since it is the normal way for the body to take up nutrients.

The parties of the debate are presented in the media are both the ones that think that the supplies are bad and should not be as easy to get hold on as they are today. Others do not agree on the magnitude of the problem and mean that it's up to each and everyone, themselves. Yet others take the debate in advantaged and uses it to spread their opinions about pills and nutrition supplies overall. Many papers and newspapers across the country have their own debate serial with big headlines and taking the sides to the extremes.

A gap that needs to be filled on the topic of DS in the scientific world is what levels of doping classified preparations different DS product contain and at what level that effects athletes and exercisers.

2.2 Guidelines from sport instances

2.2.1 SOK (*Swedish Olympic Committee*) and RF

Officially the Swedish Olympic Committee (SOK) does not recommend any kind of DS. This since the scientific evidence of the supplements is not good enough. No studies confirm that the supplements actually give anything to athletes that they can not get from a balanced and nutritious diet, or what the long time effects of the supplements are and the sometimes not known side effects and health risks for users. In addition to this there is also a number of products on the market that secretly contain doping classed substances and this means that it is a risk taking them for both everyday people as well as athletes (SOK, Sveriges Olymiska Kommitté, 2009).

RF or the Swedish National sports federation just like SOK discourage using DS if not used for medical use only. They add that the responsibility is always on the athlete himself/herself and he/she is accountable for what they eat or in any way has in the system. This has consequences in case of positive doping tests.

2.3 Purpose and research issues

Coaches are responsible for advising athletes about nutrition and supplements. This study's purpose is to try to help both existing coaches and future coaches navigate in the discussion,

see where it is heading and discern the consequences this might have for future decisions about DS among both athletes and coaches.

1. Which actors are seen in the dietary supplement debate?
2. What are the main issues in the debate?
3. Where is the debate heading?

2.4 Definitions

The definitions used in this essay:

Table 2.2

Word used	Swedish word	Definition
Dietary Supplements DS	Kosttillskott	National Encyclopedia* (2012) defines DS as provisions that are intended to supplement the normal diet, which are concentrated sources of nutrients or other substances with nutritional or physiological effect and which are provided in measured doses (NE, 2012). In this study everything between sport supplements and vitamins is determined as DS.
Coach	Coach	National Encyclopedia* (2012) defines coach as two different things such as a wagon, and that a coach is and trainer and advisor with an active leadership role mainly in sports. The later one is the definition for this study.
Social problems	-	Losekes definition of social problems: <i>In our daily lives, we tend to use the term social problem to categorize conditions that we believe are troublesome, prevalent, can be changed, and should be changed</i> (Losekes, 2003:7).
Actor	Aktör	National Encyclopedia* (2012) defines the word actor as the person, institute et.al that acts or do in a context.

** The National Encyclopedias website (ne.se) was used for definitions.*

3. Background

3.1 Survey of literature

3.1.1 *Dietary supplements*

Most gyms today offer a wide range of supplements to get power before the workout, recover faster after it or give that extra push to lose fat faster. Supplements are easy to find and large adverts often tell all about what you need and do not get from a diet of foods and snacks. Protein is a supplement that is easy to get in different forms and products and will help athletes to recover faster after a workout or a training session. A study by Cribb et al. (2007) examined creatine supplements in protein supplements and compared them with just taking protein supplements. The results suggested that a protein supplement with creatine increases the strength in some muscle fibers (Cribb, Williams, & Hayes, 2007). Jackman et al. (2009) published an article a few years later with the results agreeing with Cribb et al. (2007). They concluded that for healthy untrained men, BCAA (branched-chain amino acid) might decrease soreness after intense eccentric training (Jackman, Witard, Jeukendrup, & Tipton, 2009). In addition Woodall et al. (2010) concluded that one type of protein supplements is that one type of protein (Casein protein) has a greater fat loss attribute compared to other protein supplements (Woodall, Hattaway, Kerksick, Sedlak, Taylor, & Wilborn, 2010).

Another side of the DS is what we are told from early age, that we need vitamins and minerals to not get sick, so that we have energy to do everything we want and need to do and so that our bodies functions the way they are supposed to. Pharmacies or stores that specialize in health products sell numerous of product that are supposed help making an athletes life easier and are packed with vitamins and mineral in different doses to match different individuals and supposed needs.

Mason et al. (2012) however, suggest that studies should be made on the side effects of different DS and conclude that the supplements they reviewed do not enhance performance (Mason & Lavalley, 2012). A big issue with many of today's products is that even with scientific support, it is hard to know how they will affect us many years from now. This is because they are new and long-term use has not been evaluated. Jourkesh et al. write in their discussion that they cannot make a conclusion on the vitamin supplements used because of the big variables of nutrition and motivation in different individuals (Jourkesh, Ostojic, & Azarbayjani, 2007).

The need of more research on the DS products, their effects/side effects are urgent and important both for athletes and coaches as well as the producers and distributors. Big studies that can conclude whether the DS should be used or not is what the market needs. Small studies of small populations are not going to give the results needed to make the DS market safer for all involved.

3.1.2 Nutrition

Nutrition is one important variable of success when being an athlete and wanting to perform. Just like changes in an athletes training schedule or exercise program might have different consequences and effects, changing the diet or nutrition intake might as well.

A conclusion on the energy intake between strength and endurance athletes made by Slater et al. (2011) is that timing of when to eat is more important for strength athletes than for endurance athletes. For all athletes nutrition is an important variable to achieve competitive success (Slater & Phillips, 2011). If the timing is important a demand for DS might increase since this makes energy and nutrition intake easier than food sometimes does during a busy day. Holway et al. (2011) points out the importance of working with diet and athletes on an individual level and meet every athletes needs of nutrition and fluids even in teams (Holway & Spriet, 2011). Kreider et al. (2010) is hinting to the producers that they should develop their products and fulfill the requirements and sell scientifically based products and use the results to advertise the products for the costumer to see (Kreider, et.al., 2012). Why that is not being done is hard to say but it could be that the producers do not want to spend the money that kind of research would cost or they may be afraid that such results would not prove that their products work.

4. Method

4.1 Design

This study is a qualitative content analysis, analyzing different statements and opinions in the current media debate on the subject of DS. Through the analysis, scheduled topics or components will be pointed out and questions will be asked the texts.

Media could mean a lot of things; TV, newspapers, blogs, radio and so on. When collecting the base for this study only newspapers where used do to a simplicity collections choice. With the small amount of time given for the study looking at more types of media would make the material to study to big. The idea of the study came from a newspaper article, which made the selection among different media alternatives easier.

4.2 Sampling

When gathering the data for the analysis the goal was to find articles from newspapers published during this year to be up to date. All the articles were published in the year 2012, between 1 January 2012 and 31 April 2012. When looking in the Swedish media archive for articles printed in Swedish newspaper during the current dates on the keyword DS

(kosttillskott) it gave 428 hits, after that the process of selections began. By using additional keywords like; coach, trainer, athlete and training (tränare, atlet, och träning) the amount of results were narrowed down, by adding more keyword the number of results were as low as 3 and tops 21. Out of the 428 hits, more articles got selected to widen the material. Among the 428 hits found with the keyword DS several duplicates were found as well as small notes and even ads, all of them got deselected. 41 articles got selected and printed for analysis.

The articles were different to each other and some long while some were just additional notes for another article. The content among the articles used was DS more or less, some more debating the problem and some just adding information from instances involved or athlete's opinions.

4.3 Textual analysis

4.3.1 Analysis

During an analysis of a qualitative kind it is important to be open and aware that the schedule or procedures might have to be changed after working with the texts. As Bryman (2011:514) writes, data should be seen as indications of terms and these indications should, as the research process continuous, be continuously compared with each other (Bryman, 2011). The analysis schedule is based on Jönsons (2010:27) analysis schedule of problem components (Jönson, 2010). Jönsons problem components will help do this and be used as a model for the research (Jönson, 2010). When doing qualitative research finding topics or themes in texts are common (Bryman, 2011).

Sahlin (1999) writes that what's being discussed in media often has consequences on a political level when politicians have to act (Sahlin, 1999). Media presentations are an important source when doing research on a social problem to be able to study the definitions of the problem and the problem contractions (Flyghed, 2000). Jönson (2010) agrees with this and through his perspective he made an analysis schedule as a tool to work with the problem perspective (Jönson, 2010). Jönson (2010) suggests that the problem perspective involves examining the disagreements and discussions surrounding a problem, such as what actors are involved and which are not. Even the quiet actors might be involved and the causes of the problem and possible solutions (Jönson, 2010). In this study an analysis schedule by Jönson (2010) will be used as a design of the analysis process, see [table 4.4](#).

The Analysis schedule by Jönson (2012) has been used before to do a study on media newspaper articles. Hyltegren and Wingren (2011) used the tool to map the media discussion on sentence concerning child pornography and manga art. They used Jönsons (2010) tool in a way very much like the way is was used this study (Hyltegren & Wingren, 2011).

Table 4.3.1

Problem components	Research questions
Actors	Which are the actors of the problem? Is there any villain described?
Causes	What causes are presented? Is there talk about immorality and/or guilt?
Consequences	What kinds of difficulties are described? Is the problem big or small? Is it manageable?
Solutions	What are the suggestions of solutions? Who is said to be responsible for resolving the problem?
Progress	How is the progress and future described? What happens next?

Jönson (2010). Analysis schedule.

4.3.2 Coding

The coding analysis starts on the lowest level to find components and after that divide the components into categories and head categories (Bryman, 2011). To find these components and categories in the analysis schedule there is research questions to help you find headings and similarities and patterns in the texts (Jönson, 2010).

4.3.3 Analytic procedure

The first step in the analytic procedure was to assign the five different components with one color each. By marking with the color the questions get answers in the texts. Step two was to mark the articles with the same color at the corner with paper labels to make it easy to leave that part or article and move on. Step three was then to, in a organized way, look back at the different components to get a overview of the topic. Step four was then to gather what different actors say and also what different opinions are represented and so on, on the 5 different components. On every component the text were asked the analysis questions according to the analysis schedule. Step five was trying to find differences and similarities. The next step after that was trying to gather the information into text. Trough all of the steps a note block and a pen were kept on the side to have a chance to write down thoughts and ideas for discussion.

4.5 Ethics

There are four ethic conditions that the Council of science "Vetenskapsrådet" in Sweden requires that all researchers take in mind to make a study ethically correct. These four conditions include the information requirement, the requirement of consent, confidentiality obligations and the use requirement (Vetenskapsrådet, 2002). Regarding the information requirement active or passive sources can be used, in this study the information is already

published and the actors are passive so the risk for me as a researcher to affect the actors in anyway is eliminated. The requirement of consent means that in a study you need consent to write about someone or something from the persons involved. The confidentiality obligation requires that information about the persons being involved in the research should be handled with safety. The use requirement condition demands that you only use the information for the current research. All these have to be fulfilled to make the study ethically accepted of the Council of science. In this study where only already published material is used all of these requirements are fulfilled.

4.6 Trustworthiness

When doing qualitative research it is more or less impossible not to add a small and unconscious part of yourself (Ahrne & Svensson, 2011). Being part of the analysis is important and part of the work. By leaving the idea of doing objective research and not being part of the research you can make the analysis deeper. It might not be the same if repeated by a different person or even the same person with knew knowledge the results will differ.

5. Result

5.1 Analysis

5.1.1 Actors

Actors in the DS debate do vary from instances to experts on different subjects related to DS or nutrition to sometimes the writers themselves. Dividing them in to groups and what kind of part they play is a part of the debate. Who is saying what and what do they do and mean by what they say? Several actors are mentioned in the articles and many of them have totally different roles. Some have a big responsibility and some are just a part of the industry and want to please their clients and some are just pointing out what is not being done, what is wrong and what should be done. The sport and food instances of Sweden are several times mentioned as the ones that point out that no one need DS and should avoid them if not used for medical reasons.

One of the first to bring up the big issues of DS was the Swedish television network that in one of there shows called "Sportspegeln" (the sports mirror) told the viewer that the DS industry have become a billion industry and that sometimes dangerous substances can be found in fat loss and performance-enhancing product. Zackrisson (2012, 7 February) writes about this show as an introduction to why he writes about an interview with a weightlifter that works as an instructor. In the interview he says that in most cases just food is enough, but he uses creatine every now and then (Zackrisson, 2012).

Several of the articles are short reviews of what the Swedish sport and food instances, such as RF and SOK, rules and recommendations are. They publish this information on a spread to back up the own articles with new information and additional information for the debate. This is an example of this:

De enda kosttillskott som Livsmedelsverket rekommenderar generellt är vitamin D till äldre som inte vistas ute och till barn upp till två års ålder, samt folsyra till kvinnor som kan tänkas bli gravida.

Livsmedelsverket om kosttillskott. (2012, 04 16). Borlänge Tidning , 5.

Livsmedelsverket om kosttillskott. (2012, 04 16). Nya Ludvika Tidning , 5.

This summary was published in two newspapers on the same date in April and says that: the only Ds that Livsmedelsverket (instance of nutrition) recommends generally are vitamin D for the elderly who do not spend time outdoors and kids up to two years of age and also folic acid for woman which might get pregnant.

At some level the journalists might play a part in the debate, they rewrite facts and interprets what is being said in interviews. Just a change of words can sometimes change the hole content and it is one part of being a journalist to be able to do that, to write with their own words what should be written and what is not being written. Leaving out parts of what someone thinks and says is what might, for the reader, change the view on what the problem is or is about.

One of the actors mentioned in an article by Sundström (2012, 14 April) is Jimmy Birklin that tells the readers to remember and ask themselves who in the first place said that the supplement were good. He works at a sport federation and he deals with the elite and anti doping questions there. Birklin wants to remind everyone to be cautious with what they eat and how they supplement their diet (Sundström, Nästan inga kontroller av kosttillskott i Dalarna, 2012) (Sundström, Att det inte finns någon kontroll är skrämmande, 2012).

Other actors include the counties that control the DS. One of those is the Vänersborg County that Andersson (2012, 20 January) quotes and writes that they check that the TOC is correct. The county claims that the text on the product should be in correct Swedish and that in the text the product does not claims the product to have any pharmaceutical effects. When this along with a daily dose indicator and after a control that no elicit substances is included in the DS, they permit the distribution of the product (Andersson K. , 2012). One county is being quoted in Sundström's (2012, 14 April) article that they have not done any checks in the past but that it's on the to do list for 2012, during the year they will select some product that they will check (Sundström, Nästan inga kontroller av kosttillskott i Dalarna, 2012).

Some articles also add some interviews with academic people to back up their stories. Otterhall (2012, 26 Mars) does this and asks Michael Svensson who is a senior assistant

master at the college of Umeå. Svensson points out that he thinks that DS in most cases are not necessary even if there are exceptions (Otterhall, Få känner till hälsoriskerna med kosttillskott, 2012).

One actor, that is not really a part of the media debate, is traveling around the country, are talking about the risks with doping and sometimes the involuntary use when using DS with no declared substances in it (Hultberg, 2012). Other people sometimes even described as experts on doping, nutrition and training are mentioned in articles. Over all the advice is to not use DS if not for medical reasons.

5.1.2 Causes

The most serious cause and the one that makes the debate important is that several DS might or do have side effects when not used properly or just used without taking caution and being aware of what the consequences might be. The side effects might and can differ from one individual to another. The counties that have done checks sometimes find failures in the TOC' while some counties does not even do any checks. The problem of controls and enforcements is serious and might cause real problems for both athletes as well as everyday people without the knowledge. Even if the DS does not contain illegal substances they can still cause problems such as side effects and be addictive. Some products are marketed in an illegal way by telling the consumer that the product has pharmaceutical effect without being approved as that.

"I slutet av maj börjar en ny EU-lag att gälla. Den förbjuder företag att sälja produkter med hjälp av påståenden som inte är vetenskapligt bevisade."

Aftonbladet sid 26 Emmelie Wallroth 2012-04-25

In an article a law is presented in a evening paper, it is new and says that in late May, a new EU law to be applied. It forbids companies to sell products using claims that are not scientifically proven.

One cause mentioned in an article in Östan, Andersson (2012, 1 Jan) is that DS and their promised results might have young people develop an unhealthy approach on training (And12). In addition to this Lund (2012, 31 January) writes about a case where DS was the cause of a ice hockey players health problems. A fairly young player used creatine not knowing that it could have side effects and got serious kidney problem from taking them (Lund, 2012).

In many interviews again and again the problem of the DS not giving what they promised is a problem. And sometimes it's not even just the effect but that some product are containing

substances meant to be used in totally different ways and for other purposes. Another problem with the DS seems to be the cost, all products cost much and the producers might just be in the business to make money, not to make athletes better, stronger or faster but just to make a living.

On the other hand Otterhall (2012, 26 Mars) writes that Svensson suggests that the market has become better, and that many DS product used to contain steroids even if it was not displayed on the TOC. Svensson also points out that as a consumer you should think twice about the product that are marketed aggressively online and be cautious even if some product might be good (Otterhall, Få känner till hälsoriskerna med kosttillskott, 2012).

5.1.3 Consequences

Several difficulties are described in the articles and some are bigger and more serious than others.

In an article in Östan Andersson (2012, 1 Jan) quotes Tommy Moberg saying that as a consumer it is not safe when buying DS, it is hard to know if the TOC is truthfull. When quoting a magazine TT Spektra (2012) writes that taking too high doses of vitamin C increases the risk of getting cataracts (TT SPEKTRA, 2012).

Bogefors (2012, 9 January) quotes David Hoff that claims that no athletes on elite level takes DS. He also says that 15%, according to studies, of all the DS contains doping substances (Bogefors, 2012). In an interview by Frånlund (2012, 9 February) Swärd mentions the problem of young athletes not using the DS as supplements but as substitutes of the daily meals they should have (Frånlund, 2012).

An important part of the checking of the DS is that the product is described as a supplement and not a substitute for foods, since the product are meant to just supplement the daily meal plan for those who need more energy, protein and such. Wallroth (2012, 25 April) writes that we are drawn to buy supplements trough promises of a better body, either by loosing or gaining weight. She also writes that in a review 90% or more of the promises are just false (Wallroth, 2012).

“Efter att ha gjort flera kontroller kan hon redan nu konstatera att det finns många brister i märkningen av kosttillskott.”

(Andersson C. , 2012, p. 8)

What being said here is that after a numerous of controls there is still many deficiencies in the DS products labelling.

The health risk of using DS is in many cases unknown and can lead to sickness and injuries in the wrong hands. This is probably more common among everyday people but even athletes especially young athletes with a strong desire to succeed might not be aware of what DS in earlier years might have caused or been a part of causing. The experience of bad product have thought older athletes to be cautious with all kind of DS while young athletes do not see how the producers sometimes do not display the whole truth. What is not to forget is that not all the product are bad, and many producers just want to make products that help athletes achieve their goals. That is one reason to why the checking of the DS's is so important so that the bad product does not put the good product in bad days.

Another problem is what Hultberg (2012, 8 Mars) was told by a former body builder; that today with all the DS's on the market the risk of getting caught in a doping addiction is more independent (Hultberg, 2012).

5.1.4 Solutions

there are not that many solutions in the media debate and most of the articles suggest that the solution is that the counties do the checks that they are supposed to do. Maybe some more money could help them do it and some instance making sure that they do. The check might also be in need to be extended, meaning that the DS product content and effects need to be checked too, not just the TOC's, they are not today. Since the amount of product and distributors are just increasing something needs to be done. The more unchecked products the more uncertainty and problems might arise. Some counties say that they so far have not seen the matter as a problem before, but now when they have the knowledge they will check some products. Working together between counties is also mentioned and would be a good solution since it would be enough that one product was checked ones.

To check the products before they reach the market and stores is one important step towards a safe DS market (Sundström, Att det inte finns någon kontroll är skrämmande, 2012).

"Idrottsrörelsen varnar sina aktiva för de här kosttillskotten"

Tommy Moberg, socionom. Föreläser om dopning och ungdomar.

Andersson, K. (2012, 01 20). Man kan förstå lockelsen för unga att ta genvägar. *Östran* .

Here a journalist is quoting a social worker, which also lectures on doping and adolescent, that says that the sports movement warns the active for these supplies.

Dietary supplements, do or don't?

An idea on the check up of DS is that the government takes the responsibility and put it on one instance instead of every county for itself. A suggestion is that the Swedish food agency takes over and does a national check of the DS products. In this case the counties should still be responsible for the distributors in the county.

Wallroth (2012, 25 April) writes that from November a new law is enforced that means that it will be harder for companies that sell DS. They need to before November make sure that their marketing flaws are corrected and TOC's are in order (Wallroth, 2012).

Another solution according to some actors is just to not use any products; they recommend athletes to not use any pills, powders, liquids or any other kind of supplements. Eating food means not taking any risks that using DS might.

"Allt vi behöver finns i maten och det finns ingen genväg med piller."

Strömberg, L. (2012, 03 01). Industrin utnyttjar folks rädsla. *Göteborgs-Posten*.

The newspapers writer is here writing that everything we need is to be found in the food and that there is no shortcuts in the pills.

The coaches and leaders of young athletes, Frånlund (2012, 9 February) writes, have a responsibility to teach young athletes how to eat right (Frånlund, 2012).

5.1.5 Progress

Today the situation is sore and a bit unstable, some point out the counties to be the responsible ones for checking the DS, while counties respond with saying that they were not aware of the problem and have not done or will not do the checkups because of lack of resources and knowledge. Several articles bring up the problem that in the past the counties have not done the checks of DS that they should have done.

Since the knowledge of the problems with DS has come in to light several counties have planned for doing checks of the DS being sold in their area. Starting working together to make a better and resource saving job is being done in some part of the country.

In a article in Västerbottens-Kuriren (2012, 26 Mars) several different sport clubs in a county was asked if they had any policy on DS, six out of ten do not have one or not a finished official one at least. The rest answers to the question, that they talk with their athletes about the importance of not using the wrong preparations (Västerbottens-Kuriren, 2012). Norberg (2012, 20 Mars) writes that elite athletes more and more stop using DS and stick to foods instead (Norberg, 2012).

6. Discussion

6.1 Result

The debate started the first time an athlete used DS and tested positive in a doping control, since then lots of things have happened and the debate is far from over. Something drastic needs to be done to put and end to the problems of doping and DS. They are not at all the same even though many journalists today write about the two as being one.

In an article it os concluded that strength lifting athletes who used anabolic steroids, years later still have effect of the preparations (Eriksson, Kadi, Malm, & Thornell, 2005). This would make the whole world of sports unreliable if, athlete's years after using steroids still can race and have advantage of the auditioning athletes. No test would then know if the winner took DS with illegal preparations or not since their systems are clean.

A report by (Nagelhout, van den Putte, de Vries, Crone, Fong, & Willemsen, 2011) concludes that media could influence smokers to be more supportive of smoke-free legislation. An interesting topic to study could be to investigate weather media could influence readers, athletes and coaches on the subjects of if to use DS or not. In addition to this study the media influence on costumers would be really interesting and something that do to time has been left out.

6.2 Summary

To make a conclusion is hard and something that should be made with caution. Especially when done by a single researcher. The process of making an analysis takes time and the result is parts of the material in a short summary, to then sum up the result into a conclusion is risky and in a way personal to the writer. The conclusion of this study was made by me and might not be the readers conclusion, what is important for the reader to remember in that case is that the analysis is also made by me and might not be the same if done by someone else with other experiences.

6.3 Method criticism

Analyzing media is a balance act, media does not have the same methods as scientist do, they can put their personal opinions in to their texts. Looking for opinions in a text can be a hard

job when it is not always clear who is thinking and doing what. Who the writer is and which are his or her facts that can change a whole lot in an article.

With more time the selection frame could have been made wider and that might have increased the results in a positive way. The narrow selection frame for this study was due to the limitation of time. More material might have changed the result.

7. Conclusion

The conclusion of this study is that of the many actors involved in the media debate on DS there is no one that has a finished solution on how to solve the problem with DS today. This even though the progress is moving forward and more people now are aware that there is a problem that could have serious consequences in some cases.

8. Implications

A lot of money is spent every year on DS product, most by everyday people but also by athletes at different levels. Something needs to be done about that every person that buys a product takes a risk as long as the product has not been checked. What is being done today is apparently not enough and what the solution should be is not easy to say or point out, but that something has to be changed is clear. Several times products containing illegal substances has been found on the Swedish market in stores and online, that is not how it should be.

Either the counties or the government, someone should make sure that all of the products on the market both in stores and online shipping to Sweden is safe for everyone to use.

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