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You Don't Need This: A Strategic Persuasion Campaign for Safer Ergogenic and Performance-Enhancing Supplementation

From wearable technology to glamorized nutrition fads, bronzed bodybuilders and an entire Instagram subculture, the fitness and exercise industry continues to increase in size and prevalence, pervading the lifestyle of many in the United States. In part, this acceleration results from scientific and cultural sources touting regular physical activity as an essential preventive behavior against chronic disease and other negative long-term outcomes (Haskell 2009). Beyond health-promotive reasons, however, the fitness subculture within American society can be understood from an ethnographic lens, a creation of the “somatic representation of health” (Monaghan 2001). The ideal of a “fit” physique represents an intersection of beauty standards, social expectations, and the melding of both discipline and leisure time; “ready to be dressed up or shown, it displays vitality and control, power and utility” (Sassatelli 1). An entire constellation of consumer products surrounds fitness culture, a “spiral of consumption...equipment, supplements, magazines and so on” (Sassatelli 62). A 2015 consumer survey by the Council for Responsible Nutrition found that 25% of respondents take some type of sport or weight management supplement, compared to 19% in 2014 (CRN 2015). Studies have focused primarily on male weight trainers and athletes, as women historically tended to consume products centered on weight loss or detoxing. With the upward trend of supplementation in health-conscious individuals and the democratization of weight training for all genders, however, Euromonitor

predicts strong growth potential for women supplement users as a segment (“Female Lines Look to Make a Splash,” 2014). In addition, women under 30 report higher regular physical activity than the general population and 36% of young American women take supplements daily (Euromonitor 2013). College-aged and young adult women who engage in regular physical activity thus represent an increasingly profitable market segment for supplements.

Sport supplements can be evaluated in their efficacy as ergogenic aids, meaning they “enhance physical performance, stamina, or recovery”, which echoes the benefit claims commonly made in the advertising copy of these supplements (Merriam Webster). The popular supplements examined in developing this campaign, intended to reflect usage by college-aged, recreational gym-goers engaging in weight training, include protein powder, branched chain amino acids (BCAAs), creatine, and caffeine stimulants. While protein powder could be considered a recovery aid, no concrete evidence indicates that protein alone increases muscle mass or strength (Juhn 2003). Rather, protein powder often serves as a dietary supplement to compensate for any deficiencies in protein from regular daily nutrition; on average, consuming 1.2 to 1.7 grams of protein per kilogram of body weight has been shown to be optimal for those engaging in weight training and seeking to increase muscularity in combination with training (ACSM). Branched chain amino acids, which include leucine, isoleucine, and valine, may play a role in reducing exercise-induced muscle damage, thus being effective recovery aids. However, no convincing evidence shows BCAAs to be substantially beneficial for athletic performance (Juhn 2003). Creatine, naturally existing in skeletal muscle, can help increase adenosine triphosphate (ATP) levels in skeletal muscle during exercise; because intense exercise can deplete ATP levels, creatine would theoretically improve exercise endurance (Juhn 2003). Finally, moderate levels of caffeine have been shown to improve endurance during anaerobic

exercise as compared to conditions without caffeine, but any noticeable effects of caffeine for endurance seem to plateau between moderate and high dosage levels (Juhn 2003).

In a study of young Canadian athletes, 81% of participants stated athletic performance as their primary reason for using protein powders and BCAAs, and stated muscle building and increasing energy as reasons for using ergogenic aids in general (Parnell 2015). Elite athletes, physique competitors, and even non-professionals may choose to pursue a more substantiated, drastic approach by engaging in so-called doping behaviors, most commonly in the form of anabolic steroids. Anabolic steroids refer to synthetic derivatives of testosterone used to increase protein synthesis and thus maximize muscularity (Juhn 2003). The Anabolic Steroids Control Act of 1990 illegalized the “purchase, trafficking, and use of anabolic steroids”; under the FDA’s 1994 Dietary Supplement Health and Education Act, however, dietary and nutritional supplements do not require FDA approval prior to market entry, and can only be pulled off the market if they advertise unsubstantiated claims (Barkoukis 2015; FDA 1994). Even this lenient warning has not appeared to be stringently enforced. For instance, a 2012 systematic assessment of bodybuilding magazine advertisements found that brands primarily emphasized the performance-enhancing benefits of their products (Heneghan et al. 2012). This has raised concerns regarding the safety and efficacy of legal sport supplements currently circulating the fitness market.

A possible causal link between legal supplementation and illegal steroid use has motivated studies on the attitude formation behind both types of supplementation, and the ways in which these mechanisms may overlap or correspond. One approach applies the “gateway theory”, borrowed from language surrounding drug use, to the use of anabolic steroids, which past correlational data could support. Doping use, for example, was three and a half times more

prevalent among supplement users than among non-supplement users in one self-report study (Backhouse et al. 2013). Furthermore, supplement users reported significantly more favorable views towards doping and greater belief in its effectiveness (Backhouse et al. 2013). One study of adolescent boys suggested that those taking supplements were more likely to have lenient views toward illegal steroid use (Yager & O’Dea 2014). Beyond correlational data, however, evidence for sport supplementation as a cause or predictor of future anabolic steroid use remains purely epidemiological and not proven on an individual basis (Backhouse et al. 2013). Other studies suggest that sport supplementation and anabolic steroid use stem from similar causes, but do not necessarily constitute a chain of sequential behaviors (Backhouse et al. 2013). Petróczi and Aidman (2009) argued that an athlete’s attitude towards performance enhancement could be key to informing doping behaviors. Performance enhancement, highly valued desire for athletes, could be one motivation component of an attitude and behavior that leads to supplementation in some individuals, but results in illegal anabolic steroid use in other individuals.

Despite uncertain safety and efficacy, and a potential link to anabolic steroid use, fitness culture and consumption perpetuate a favorable attitude toward the effectiveness of supplementing an existing training and nutrition regime. Additionally, legal sport supplements’ negligible or unsubstantiated effects on performance enhancement, as examined in scientific literature, reveal that marketing messaging and the fitness culture’s hype surrounding them do not accurately represent their optimal use cases, limitations to their benefits, and their empirical efficacy. In an attempt to both acknowledge the potential benefits of legal supplementation for weight training and to properly communicate safe behaviors in usage and dosing, this strategic persuasion campaign elaborates on attitudinal insights from a questionnaire of college-aged male and female weight trainers.

Among 10 respondents, five male-identifying and five female-identifying, three reported using no supplements in the past year. Of the remaining seven respondents, all reported using protein powder, four reported creatine use, four reported caffeine stimulant use, and three reported using BCAAs. Protein as most prevalent, consistent with Parnell's 2015 findings, may reflect the craze around adequate, even excessive, protein consumption in fitness culture, but may also serve a utilitarian function, as protein powder fulfills daily protein requirements in a more cost-effective way per gram than many lean protein food sources, such as chicken breast (Parnell 2015).

Those who reported strongest beliefs in the efficacy of anabolic steroids also tended to agree to a greater extent that anabolic steroid use is not sufficiently regulated. Among these respondents, only one reported current steroid use or favorable attitudes towards considering future steroid use. Attitudinal and behavioral literature typically considers anabolic steroid use to be a deliberately reasoned action; building on Azjen's Theory of Reasoned Action, the decision to engage in doping behaviors would theoretically result from a consideration of its legal and health consequences, as well as its substantiated effect on muscle development (Bodenhausen lecture 2017). Additionally, subjective norms informed by gym partners, friends, family, or the fitness community at large introduce a strong negative evaluation regarding the desirability of doping. This cost-benefit analysis may impede implicit attitudes regarding anabolic steroid use from manifesting into intention and behavior.

Realistically, those currently engaged in supplement use will continue to have credence for these products; based on questionnaire results, all respondents reported either neutral or favorable attitudes towards the effectiveness of sport supplements in enhancing muscularity, which evidence has not necessarily disputed. Those who reported taking/having taken one or

more supplements in the past year also tended to report more favorable attitudes of supplements' effectiveness in enhancing both performance and muscularity (in two separate items). This landscape poses opportunity for market entry of a supplement brand offering a range of products based on scientific research and manufactured using only compounds or components empirically proven to be safe and efficacious. By entering the sport supplement product category with a breakthrough, transparent message that shifts existing attitude paradigms, responsible supplement usage will resonate throughout the fitness industry in both branded and unbranded channels. Given the relevance of these attitudinal and behavioral objectives to the lives and health of supplement consumers, this campaign employs approaches characteristic of high-involvement advertising. A refreshing change from the gimmicky, oversaturated claims made by the majority of players in the supplement category, a transparent message questioning the safety and efficacy of supplements that currently hold the lion's share of the market would benefit as a "minority" brand, forcing audiences to engage in deeper elaboration of messaging content. If successful, this implementation of central route persuasion by a "minority" brand will be more resistant to future counter-persuasion (Bodenhausen lecture 2017).

Development of a persuasion campaign in this sphere will aim to achieve three primary attitudinal objectives. Firstly, cognitive aspects of the campaign seek to bolster positive attitudes toward potential benefits of supplementation, but will crucially promote a greater level of discernment and caution regarding supplement selection, usage patterns, dosage, and realistic expectations of their efficacy. Secondly, affective aspects of this campaign build upon self-efficacy and perceived control regarding the achievement of sustainable health and fitness goals over time, with the goal of persuading supplement users to view behaviors like anabolic steroids as drastic and unnecessary, rather than as potentially attractive "shortcuts" solutions for physique

or performance goals. Additionally, an emphasis on self-efficacy in achieving goals seeks to dissuade consumers from over-reliance on supplements, incorrect usage cases and dosing, and blind trust of product claims. Self-efficacy in one's fitness and health journey will hopefully favorably influence attitudes toward a regular exercise and nutrition regimen as health-promotive behaviors that should be maintained and fortified.

Beginning with the cognitively-oriented attitudinal objective, questionnaire respondents generally exhibited aspects of moderate to high cognitive elaboration regarding supplement use. 90% of respondents reported seeking information about sport supplements from friends, and 70% reported reading exercise science journal articles for information. In follow-up interviews, respondents reported using the Internet to verify or confirm what they had heard from friends, indicating a consumer journey with at least two points of information seeking. Reported information sources of this sample remain consistent with previous research, in which bodybuilders turned first to acquaintances and coaches for knowledge regarding physiological supplementation (Kurszewski et al. 2012). The consultation of others reflects an behavior of informational social influence, which stems from a need for the correct belief about an attitude or behavior, and relates to the knowledge function of attitude formation (Bodenhausen lecture 2017). Most valued among information sources about supplements, in fact, were experiences of friends and family, and supplement users turned to other media sources for information in later stages of the consumer decision journey (Nichter & Thompson 2006; DeLorme et al. 2012). Given these findings, supplement users' sources of information suggest the effectiveness of a word-of-mouth approach for tactical execution of this educational strategy, which would leverage the influence of similarity to others and social consensus (Bodenhausen lecture, 2017). In the interest of spreading accurate and scientific information regarding supplement safety and

efficacy as a behavioral objective, success of this campaign requires creating buzz around the movement of supplement transparency. Messaging would thus be carried out on prominent social platforms such as Instagram and YouTube, that allow for the development of an influencer's multi-faceted, relatable personal presence.

Co-branding of this supplement brand with a prominent, community-based gym as a second phase would serve as an additional educational channel. Brand placements in gyms target supplement users at two levels. Firstly, as market research shows, gym-goers are more likely to use supplements as compared to the general population (Euromonitor 2013). Secondly and more actionably, this breakthrough supplement brand's positively-framed messaging introduced in a gym setting could leverage extraverted gym-goers' reward-based motivation. Rationale for this follows the so-called "matching hypothesis", suggesting that messages aligned with the structure or function of a certain attitude for a recipient will be more powerful in persuading the recipient; in this case, the campaign targets the motivations underlying the nature of extraverted individuals, leveraging one of the Big Five personality types (Bodenhausen lecture 2017). Effectively, association of this supplement brand with a prosocial, performative space like the gym taps into the extrinsic reward of social approval, potentially increasing ad likeability, and eventual behavioral intention to perhaps sample or purchase the brand (Wu et al. 2012; Bodenhausen lecture 2017). In a prior study, individuals' extraversion levels predicted their reactions to an ad whose messaging had been clearly tailored towards extraversion-related motivations, such as being the life of the party (Bodenhausen lecture 2017; Hirsh, Kang, Bodenhausen 2012).

While a supplement brand propagating such a message may appear contradictory or linked to communicator self-interest, the inclusion of substantiated information increases the

believability of the message, and hopefully of the brand. Believability in ads has been correlated with supplement brand likeability in a prior study, suggesting that a believable ad that could actually positively differentiate the brand (Wu et al. 2012).

Addressing the second attitudinal objective, the improvement of attitudes toward self-efficacy and discipline in achieving fitness goals, involves multiple targeting efforts. Generally, respondents exhibited moderate to high intentionality when describing their rationale behind using different supplements. Stated explanations included using caffeine fat-burners for “dieting”, or creatine when “really focusing on muscle gain and toning” and “during bulking cycles”, all characteristic of structured fitness regimens in the temporal scale of months. Reporting of these intentional behaviors by supplement users appear consistent with a study in which supplement users were significantly more likely to report engaging in health-promotive behaviors (e.g. eating a balanced diet, exercising regularly, and maintaining a healthy weight) than non-users (Dickinson et al. 2014). The minimum behavioral objective of a self-efficacy strategy might be prevention of anabolic steroid use; according to the aforementioned common cause theory, similar performance and physique motivations may drive some individuals to engage in illegal steroid use, while others may resort to sport supplements. Respondents, while not doubting the efficacy of anabolic steroids for their intended uses, also held explicit attitudes about their own unwillingness to engage in anabolic steroid use to achieve muscularity and performance results at the expense of legal and health factors. The two respondents who reported potential consideration of using hormone-altering substances if these substances would help maximize muscle gains identified as male; one explanation for this result could be the detrimental health trade-offs anabolic steroid use poses for women, such as impairing future fertility (ACOG). Furthermore, anabolic steroids succeed at fulfilling simultaneous drives among

men to achieve the ideal of both leanness and muscularity through their training (APA). Prior research also found that males were more likely to use sport supplements for athletic performance purposes, while females reported more appearance-oriented goals (Backhouse et al. 2011). These insights provide important implications for gender targeting in self-efficacy messaging.

More relevant to this audience, however, who report holding strong attitudes regarding unwillingness to use anabolic steroids or concerns about long-term health effects of steroids, this campaign primarily seeks to reform attitudes that may lead to irresponsible overuse of legal supplements, such as the belief that supplements are necessary for achieving fitness goals. Respondents who reported taking three or more supplements also reported the lowest degrees of concern about the effects of supplementation on long-term health, possibly exhibiting an ego-defensive function - due to these individuals' higher level of supplementation, disparaging information about potential negative health effects would serve to protect existing favorable attitudes toward supplement safety and efficacy (Bodenhausen lecture 2017). In part, the factual information aimed at the first attitudinal objective, focused on the propagation of scientific evidence, could moderate blind trust in supplement efficacy among this segment. For this factual information to manifest in behavioral change, however, this cognitive information should be married with the self-efficacy approaches detailed in the campaign's second attitudinal objective.

Building on supplement users' clear time and indicated financial investment in their personal ideals of health and fitness, this affective portion loosely employs a cognitive dissonance approach by questioning the safety and efficacy of existing supplement brands. Messaging will not employ induced compliance, a technique by which one would be induced to perform an action inconsistent with their beliefs or values, consequently causing them to adjust

their belief or attitude to restore consonance (Bodenhausen lecture 2017). Rather, messaging should make salient the fact that supplement users might currently be engaging in a behavior contradictory to long-term physical health: supplementation habits that (a) introduce unsafe components to the body or (b) ignore dosage or usage recommendations. Risky behaviors can also be explained through the duality of bodies as represented “health” paralleled with true internal bodily health; when bodybuilders, for example, conflate bodily appearance with internal well being, the quest to perfect one’s body as the “image of health” could minimize any intrinsic concerns about risky behaviors like unsafe supplement use (Monaghan 2001).

One approach, informed by the importance of supplement safety, involves messaging purely around the concerns of supplement overuse. However, in a 2015 meta-analysis of fear appeals, Tannenbaum et al. found that messages based on fear appeals had a greater impact when they included statements of efficacy (Bodenhausen lecture 2017; Tannenbaum et al. 2015). Additionally, Rogers’ Protection Motivation Theory proposed that individuals’ perceived efficacy levels determine their danger-response controls (Bodenhausen lecture 2017; Wu et al. 2012). Developing greater perceived self-efficacy in attitudes surrounding supplements could address supplement concerns, and could also lead to more sustainable long-term behavioral intention. Firstly, in regards to supplement concerns, self-efficacy regarding one’s long-term health encourages taking control and initiative to consult scientific research and professional sources regarding appropriate supplement usage behaviors, rather than feeling overwhelmed and thus dissociating present supplement behavior from potential future harm. Secondly, and perhaps more sustainably, self-efficacy toward achieving fitness goals through hard work and consistency over time dissuades overemphasized credence in or reliance on legal supplementation (e.g. feeling that progress without reliance on supplements would be impossible or undesirably slow).

With these two self-efficacy outcomes in mind, messaging would center on the affective effects of working towards fitness aspirations. Encouragingly, performance accomplishments in one's fitness experience have been shown to be influential in one's expectations of self-efficacy (McAuley & Blissmer 2000). Furthermore, respondents' self-stated fitness goals in this questionnaire could be positioned as aspirations achievable through discipline, determination, and intention.

Messaging for self-efficacy emphasis could live in several consumer touch points for the aforementioned scientific-based supplement brand. In the brand awareness stage, digital or social display ads could introduce the brand with unexpected, slightly tongue-in-cheek statements such as "You don't need this." As for stages of seeking information or contemplating purchase, the supplement brand should include more surprising, transparent copy on packaging and social media posts emphasizing one's self-efficacy in achieving performance, strength, and physique goals. For example, accompanying the surprising, shorter taglines would be secondary copy in smaller text, paraphrasing scientific information such as "One to three hours after you've killed your training session, taking essential amino acids with a carb source may help your muscle synthesis, but doesn't prevent muscle protein breakdown. It's all on you to eat right for muscle recovery. This is just the cherry on top." Product packaging, typically in the form of plastic containers, would also contain copy and graphics detailing important safety information, a practice borrowed from pharmaceutical advertising, regarding dosage and usage occasions (i.e. "Mix one scoop with 8 to 12 ounces of water one to three hours after training sessions"). For a caffeine stimulant pre-workout product, for example, attention-catching copy could read "Less is more", accompanied by smaller, secondary copy reading "A little oomph can keep you going longer, but taking more than the recommended dose has been proven to have no beneficial

effects on your training. Dig deep and get your mind right - everything you need is within you.” Essentially, across all product variations, this messaging should consistently place the onus of control on the individual and highlight realistic expectations of taking supplements.

In contrast to the metallics and bold colors employed in other brands’ ads and packaging, this supplement brand could employ softer tones to differentiate themselves from the flashy branding and messaging of existing brands. While the bolder packaging of other brands could dominate visual attention, research has revealed that visual salience, a peripheral cue, increased ad recall and purchase intent only if contextual targeting was low (Bodenhausen lecture 2017; Goldfarb & Tucker 2011). For this campaign, visual salience does not take high priority, given that this self-efficacy strategy has been developed based on contextualized attitudinal formation. After the brand awareness and information search stages, these differentiated supplement products would likely be purchased with strong intentionality, hopefully mitigating the salient peripheral visual cues of other brands’ ads.

After developing a brand identity of transparency and trust, self-efficacy messaging could also live on influencer channels, linked to the educational information discussed previously. The brand could, for example, develop video content profiling sponsored individuals who associate weight training with positive affect, such as self-determination and fortitude, rather than emphasizing external bodily motivations. These communicators should also be selected with realistic fitness expectations in mind, in order to relate to audiences through a shared “journey” metaphor to reaching achievement goals. Within their profiles, selected communicators could employ narratives about defining moments in their fitness journeys, such as turning to the discipline and rewards of training during times of adversity. Narratives could improve “stickiness” and memorability for this self-efficacy messaging, as these communicators would

garner emotional resonance in their stories (Bodenhausen lecture 2017). Influencers could also share methods for achieving desired muscularity naturally, such as different training progressions or selecting exercises shown to exert the highest electromyography levels in specific muscles. By reforming the conversation in this segment of fitness culture, self-efficacy strategy could shift attitudes away from belief in the unsubstantiated efficacy of supplements and towards the efficacy of individuals in these health-promotive behaviors.

Over-reliance and unsubstantiated credence in the supplement product category remains a controversial, grey-area issue in fitness culture among both professional and recreational weight trainers. By incorporating actionable insights from prior research and the questionnaire at hand, the described supplement brand campaign seeks to increase responsibility where government entities and existing brands have remained silent or complicit. Developing a strategy based on underlying motivations for supplement use would aspirationally result in safer behaviors and adjusted expectations, and empower individuals through their own capabilities for achieving success in sustainable, realistic, and inspiring ways.

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