Adults' Perceptions of Words for Exercise Goals

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DEDICATION

For my amazing network of family and friends who supported me along the way, my supervisor who among many other things taught me how to preserver, my patient and understanding boyfriend who dragged me through this process kicking and screaming, and my ever-present writing partner Finn. I could not have done this without you.

ABSTRACT

The purpose of this research was to explore which exercise goal words adults' perceived to be intrinsic and/or extrinsic, how these perceptions differed from those of SDT experts and whether goal orientation and gender played a role in these classifications. A cross-sectional, online survey was presented to SDT experts (n = 13) and general population participants (n_{men} = 123, n_{women} = 188). Chi-Square tests were used to explore differences in perception of 118 words by expertise (general/expert), gender, and goal orientation. Within the general population, 46 words were perceived as intrinsic and 25 as extrinsic. Additionally, experts and general population participants differed significantly on 55% of words, men and women on 21% and differing goal orientations on 7%. Findings identified 71words that most participants perceived as intrinsic/extrinsic, therefore researchers can feel confident using. These findings also highlight 55 words that the general population's perception contrasted theory and researcher's perceptions.

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LIST OF ABBREVIATIONS

PA	Physical Activity
WHO	World Health Organization
CMSSBC	Comprehensive Messaging Strategy for Sustained Behaviour Change
SDT	Self Determination Theory
GCEQ	Goal Content for Exercise Questionnaire
BREQ	Behavioural Regulation in Exercise Questionnaire
MET	Metabolic Equivalent of Task
SPSS	Statistical Package for the Social Sciences

Introduction

Physical Activity Trends in Adults

Physical activity (PA) is defined as any voluntarily movement which requires energy expenditure by the skeletal muscles (Caspersen et al., 1985). Within the broader category of PA, exercise is differentiated as bodily movements which are planned, structured, and repetitive, and undertaken with the objective of improving or maintaining physical fitness components (Caspersen et al., 1985). It is well known that regular PA and exercise are important protective agents against many diseases including obesity, type 2 diabetes, specific types of cancer, cardiovascular disease, osteoporosis, hypertension, and premature all-cause mortality among adults (Bryan & Katzmarzyk, 2011; Humphreys et al., 2014; Reiner et al., 2013; Rhodes et al., 2017; Varela et al., 2017; Warburton & Bredin, 2017). These finding have been seen globally with a study of over 130,000 adults from 17 different countries, indicating that higher amounts of both recreational and non-recreational PA were associated with a decreased risk of cardiovascular disease and all-cause mortality (Lear et al., 2017). These authors articulated that increasing PA in adults is a widely applicable strategy to reduce cardiovascular disease and related deaths globally (Lear et al., 2017).

Canada for example, is a country with concerningly low levels of PA in the general population (Di Sebastiano et al., 2020; Marchand et al., 2020; Ross et al., 2020). In 2020, the Public Health Agency of Canada, in association with stakeholders, developed updated PA guidelines for children, youth, adults, and older adults, recommending 150 minutes of moderate to vigorous PA per week for adults aged 18-64 (Ross et al., 2020). Accelerometer data from 2016 and 2017 showed that only 45% of Canadians met these guidelines (Clarke et al., 2019). Similarly, a Canadian study of nearly 2,000 university students (mean age 25 years) conducted

by Busque and colleagues (2017) reported that 55.2% of students were not meeting the current Canadian PA guidelines of 150 minutes of moderate to vigorous PA per week. As of 2019, less than 50% of Canadian adults' self-report meeting or exceeding this guideline with a dramatic decrease in this percentage of the population in 2020 due to the COVID-19 pandemic and physical distancing measures implemented nationally (Di Sebastiano et al., 2020; Ross et al., 2020). These findings highlight the need for PA and exercise interventions in this population.

Given the overwhelming evidence published over the last several decades expressing the dangers of inactivity and globally low levels of PA in adults (Bryan & Katzmarzyk, 2011; Humphreys et al., 2014; Reiner et al., 2013; Rhodes et al., 2017; Varela et al., 2017; Warburton & Bredin, 2017), the World Health Organization (WHO; 2018) outlined the *Global Action Plan on Physical Activity 2018-2030.* This action plan encompasses four objectives and 20 policy actions to be applied universally across cultures and environments. The objectives of this multi-layered document include 1) creating an active society through the promotion of social norms and attitudes with an appreciation for regular PA, 2) creating active environments by promoting and maintaining spaces and places to engage in regular PA, 3) creating active people by promoting programs and opportunities to engage in regular PA, and finally, 4) creating active systems through government and policy across sectors (WHO, 2018).

Under the first objective of creating an active society, two actions center around improving the communication of PA information. The first of these two actions advocate for implementing best practice communication campaigns with the aim of increasing awareness, understanding and appreciation for the many health benefits of regular PA (WHO, 2018). This action focuses not only on communicating health benefits but implementing comprehensive research-based communication strategies. The second action involves conducting informational

campaigns both on the national and community level to enhance the public's awareness of the many social, economic, and environmental benefits of regular PA (WHO, 2018). One such way that health information can be communicated to large populations is through messaging.

Messaging: An Overview

What are Messages?

Messages can be defined as educational and/or persuasive materials communicated to an audience as a strategy for increasing a given behaviour (Williamson et al., 2020). Whether in digital, print, or video format, messages are a popular way of disseminating information as they are a scalable, cost and time-effective strategy for reaching a broad audience (Cavill & Bauman; 2004; Hillsdon et al., 2001). Messaging (the strategy of disseminating messages to an audience) is commonly used in health promotion communication (the dissemination of information to inform, motivate, and influence an audience about important health issues; Williamson et al., 2020), the overarching context in which regular PA and exercise are situated.

Scholars have articulated that effective messaging should emphasize increasing the personal relevance of information to the recipients and fostering motivation for behavioural change (e.g., Pelletier & Sharp, 2008; Pope et al., 2018; Williamson et al., 2020). The emphasis placed on communication within the WHO's global action plan highlights the importance of effective, evidence-informed, PA messages. As a result, a growing body of research in exercise psychology has focused on increasing the effectiveness of exercise promotion messaging and providing best-practice recommendations for these types of messages (for a review see Williamson et al., 2020).

Message Tailoring vs. Message Framing

Within messaging design and research, two prominent strategies have emerged as methods of increasing the likelihood that a behaviour is internalized and maintained long-term-message tailoring and message framing (Latimer et al., 2010; Pope et al., 2018). Message tailoring focuses on adapting aspects of a message to one or more pre-existing characteristics (e.g., physical, psychological, behavioural) of the message recipient such as gender, age, or stage of change (Latimer et al., 2010). On the other hand, message framing focuses on how a message is conveyed to a broader audience through emphasising different aspects of the message content, regardless of the characteristics of the reader (Pope et al., 2018). To date, message tailoring has received less empirical attention compared to message framing. This may relate to the nature of message tailoring, preventing these messages from being widely generalized to a broad audience and requiring more resources to produce (Pope et al., 2018). Thus, message framing research has the potential to impact a greater number of message recipients, message producers, and researchers compared to message tailoring.

The message framing literature to date has mainly examined gain-framed versus loss-framed messages based in the Prospect Theory (Tversky & Kahneman, 1981). Gain-framed messages emphasise what the reader will gain by performing a behaviour (i.e., exercising regularly can help you lose weight and stay healthy), while loss-framed messages emphasise what the reader may lose by not performing a behaviour (i.e., if you do not exercise regularly, you may gain weight, putting your health at risk; Bassett-Gunter et al., 2013). However, research has not conclusively demonstrated whether gain- or loss-framed messages are more likely to elicit long-term behavioural change within health communication (Bassett-Gunter et al.,

2013), with some studies producing mixed results (Jensen et al., 2018; Lee & Kang, 2017) and some studies showing no significant difference at all (O'Keefe & Jensen, 2006).

One of the prevailing conclusions identified by behaviour change researchers was that the mechanisms behind behaviour change are complex and messages which advocate these changes must employ a multi-theoretical approach which focuses on motivating behaviour initiation and behaviour maintenance (Gallagher & Updegraff, 2012; Pelletier & Sharp, 2008; Pope et al., 2018). With a consensus on best practice message framing yet to be reached, researchers have advocated for framing behaviour change messages using a sound theoretical framework that focuses on motivation and/or other behaviour change strategies (Pelletier & Sharp, 2008). One strategy that has been suggested to improve message framing effectiveness is the Comprehensive Messaging Strategy for Sustained Behaviour Change (CMSSBC; Pope et al., 2018). Based on the work of Pelletier and Sharp (2008), this strategy is a multi-theoretical approach to messaging which endorses message framing guided by Self-Determination Theory (SDT; Deci & Ryan, 1985).

Self-Determination Theory: Theoretical Background

What is Self-Determination Theory?

SDT is an empirically based, comprehensive and evolving macro-theory containing six mini theories which together, seek to explain human behaviour (Ryan & Deci, 2017). These six mini theories are Cognitive Evaluation Theory, Organismic Integration Theory, Causality Orientations Theory, Basic Psychological Needs Theory, Goal Content Theory, and Relationships Motivation Theory (Deci & Ryan, 1985, Deci & Ryan, 2000). For the purposes of this thesis, only Goal Content Theory, and to a much lesser extent Basic Psychological Needs Theory will be explored. For more detail on these mini theories please see Figure 1. SDT

employs an organismic dialectical approach in the study of human personality, growth, and development. From the organismic perspective, SDT posits that humans are growth-oriented organisms, active in their environments, who innately seek out and engage with challenges, attempting to fulfil their potentialities and capabilities (Ryan & Deci, 2004). However, the organismic theory is only one side of a dialectical framework. The social environment can also serve to facilitate or block an individual's attempts to engage with or master a new situation as well as integrating those experiences into a coherent sense of self (Ryan & Deci, 2004). According to SDT this supporting or thwarting of an individual's innate growth tendencies is accomplished through the fulfillment of the basic psychological needs (Ryan & Deci, 2004).

Basic Psychological Needs

Proponents of the SDT state that there are three basic psychological needs, which like physical needs, impact on one's growth and well-being in measurable ways based on the extent to which they are fulfilled or not fulfilled (Ryan & Deci, 2017). These needs are autonomy, competence, and relatedness. Autonomy is defined in SDT as "the need to self-regulate one's own experiences or action" (Ryan & Deci, 2017, p.86) and can be thought of as being the axis from which a behaviour originates or a sense of voluntariness and feeling volitional over one's actions (Ryan & Deci, 2017). For example, allowing an exerciser the choice between two different exercises in a group fitness class would support that exerciser's basic psychological need of autonomy. The second basic psychological need described within SDT is competence, defined as "the need to feel effectance and mastery" (Ryan & Deci, 2017, p.86). More simply, competence can be described as the individual perceiving that they ability to be effective in their environment. For example, setting small, easily achievable, milestones for children learning to skate then gradually building the difficulty level, would support the children's basic

psychological need of competence. Finally, relatedness is described as feeling a mutual sense of connectedness, care, and respect with significant others (Ryan & Deci, 2017). For example, attending a group fitness class with a close friend would support both participant's basic psychological need of relatedness. SDT argues that the basic psychological needs are the foundational building blocks required for psychological health and the development of autonomous forms of motivation (Ryan & Deci, 2002). The fulfillment, or lack thereof, of the basic psychological needs has been thought to explain the large individual variance in the development and enactment of motivation across the lifespan (Deci & Ryan, 2000). Taken together, the concept of basic psychological needs serves to define the contextual factors which foster or undermine performance and motivation (Ryan & Deci, 2002).

Because of its critical role in the development of motivation, the fulfilment of basic psychological needs has become a key focus in the development of behaviour change strategies using SDT as the underlying theory (Ryan & Deci, 2002). Specifically, in the areas of exercise and PA, a 2018 meta-analysis found a positive association between PA and all basic psychological needs, with some changes in affect (any experience of feeling, emotion, or mood; VandenBos, 2007), being linked to the influence of basic psychological needs (Teixeira et al., 2018). A positive affect was associated with the fulfillment of all basic psychological needs while a negative affect was associated with basic psychological need thwarting (Teixeira et al., 2018). Within the PA domain, general basic psychological need satisfaction has been shown to predict psychological well-being (Gunnell et al., 2013). Alternatively, psychological needs thwarting predicted negative affect and contributed to the prediction of ill-being, not well-being (Gunnell et al., 2013). The authors caution that additional research is required to explore the relationship between basic psychological need fulfillment and affect as other variables such as

intrinsic motivation and intrinsic goals may be confounding this relationship (Teixeira et al., 2018). In the exercise domain specifically, intrinsic goals (which are discussed at length below) have been shown to positively predict psychological need satisfaction even when a participant's base level of self-determination has been controlled for (Sebire et al., 2009).

While this thesis does not focus on basic psychological needs explicitly in this line of inquiry, it is important to introduce these concepts, as they form the foundation of Basic Needs Theory (Ryan & Deci, 2000), one of the six mini theories of the SDT framework. Basic Needs Theory was formulated to describe the relation of motivation and goals to health and well-being (Ryan & Deci, 2004) and is therefore critical to understanding goals within the SDT context, as well as the potential psychological and behavioural implications. For a short description of all six mini theories of SDT please see Figure 1.

Motives and Goals: Interplay and Differences

While in common language the words motivation and goals may be used interchangeably, within SDT they represent fundamentally different concepts. According to SDT, goals are "what" an individual aims to achieve through a behaviour, and motives represent "why" an individual pursues a behaviour (Deci & Ryan, 2000). Goals and motives interact with one another. For each "what" an individual wishes to achieve (goal), there is also a "why" the individual wishes to achieve that specific goal (motive). As with basic psychological needs, while the focus of the current study is goals and not motives, it is imperative to understand both concepts and how they differ.

Motives

In its most simplistic form, motivation is the reason that people act and the energy to accomplish a behaviour (Deci & Ryan, 2000). Motivation can be described in terms of both quality and quantity. While the general population often focuses solely on the quantity of motivation, the quality of motivation is a core element of SDT and arguably of greater importance when developing behaviour change strategies (Deci & Ryan, 2000). SDT describes motivation quality along a continuum with six categories that are associated with different outcomes. These categories vary in the extent to which they are self-determined (the extent to which a behaviour is autonomous and/or volitional; Deci & Ryan, 2000).

According to proponents of SDT, human motivation ranges from intrinsic motivation, the most self-determined, to extrinsic motivation, the least self-determined, (further divided into integrated regulation, identified regulation, introjected regulation, and external regulation) to amotivation (a complete lack of motivation), listed here from most to least self-determined. Intrinsically motivated behaviours are internal to the individual and undertaken primarily out of interest and enjoyment (Ryan & Deci, 2017). Integrated regulation represents pursuing a behaviour, although it may not always be enjoyable, (such as exercise), because it is in line with one's sense of self (Deci & Ryan, 2000). Identified regulation is the conscious endorsement of the value and importance of a behaviour, for example an individual may not enjoy exercising but pursues the behaviour because they understand the benefits to their mental and physical health (Deci & Ryan, 2000). Introjected regulation is the motivation behind a behaviour related to feelings of "must or "should". An individual may feel that they should be exercising, not because they endorse the value of the behaviour, but based on the internal pressure they feel such as guilt or a sense of obligation (Deci & Ryan, 2000). Finally, external regulation is the form of

motivation most independent of the individual's sense of self, focused on compliance with external pressures such as a doctor's orders, attainment of external rewards, or avoidance of external punishment (Deci & Ryan, 2000). The pursuit of more internalized motives is both attributed to the fulfillment of basic psychological needs and a result of need fulfilment (Deci & Ryan, 2000).

While all forms of motivation lead to the initiation of a goal-directed behaviour, the emotional and psychological outcomes, as well as the individual's ability to maintain that behaviour over time, vary greatly depending on the type of motivation that guides that behaviour (Ryan & Deci, 2002). SDT research over the last two decades has consistently shown that when individuals perform behaviours for self-determined motives (intrinsic motivation, integrated regulation, and identified regulation), they are more likely to sustain those behaviours overtime (Deci & Ryan, 2000; Guertin et al., 2015; Ryan & Deci, 2002; Silva et al., 2011). More self-determined forms of motivation have also been positively associated with positive psychological outcomes such as increased self-efficacy (confidence in one's abilities to be successful in a specific context; Silva et al., 2011), increased perceived basic psychological needs support (Moustaka et al., 2012), improved work performance (Kuvaas et al., 2017), and greater life satisfaction (Guertin et al., 2015), and negatively associated with non-adaptive outcomes such as burnout and work-family conflict (Kuvaas et al., 2017). Alternatively, individuals who pursue a behaviour based on non-self-determined motives (introjected regulation and external regulation) have a weakened perception of their self-efficacy, increased incidence of ill-being such as depression and anxiety, and are more likely to experience only initial/short-term adoption of behaviours (Deci & Ryan, 2000; Deci & Ryan 2008; Guertin et al., 2015; Silva et al., 2011). According to proponents of SDT, understanding why an individual pursues a behaviour provides

only half the story; the decision of what (goals) an individual wishes to achieve is equally as important and is correlated with its own host of varied outcomes (Deci & Ryan, 2000).

Goals

According to the SDT, goals can be defined as intrinsic or extrinsic (Deci & Ryan, 1985). An individual with and intrinsic goal aims to achieve something inwardly focused that relates to physical or mental health, personal growth and development, and/or relationships with friends, family, or loved ones, or helping one's community or the broader world (Deci & Ryan, 2017). Alternatively, extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity, or social status, or on tangible rewards from others such as money or physical items (free gym bag, water bottle, etc.; Deci & Ryan, 2017).

Within PA and exercise research, goals are often operationalized using the Goal Content for Exercise Questionnaire (GCEQ; Sebier et al., 2008). This scale is made up of five subscales, three related to intrinsic goals and two that relate to extrinsic goals as conceptualized by Kasser and Ryan (1993; 1996). The intrinsic subscales are health management, skill development, and social affiliation (Sebire et al., 2008), while the extrinsic subscales are social recognition and image (Sebire et al., 2008). Example items from each subscale include "to increase my resistance to illness and disease" (health management), "to acquire new exercise skills" (skill development), "to connect with others in a meaningful manner" (social affiliation), "to be well thought of by others" (social recognition), and to "improve the look of my overall body shape" (image; Sebire et al., 2008). These sub-scales can be averaged to compute a composite goal orientation score for each participant, with negative scores representing generally more extrinsic goal orientations and positive scores representing generally more intrinsic scores (Pope et al., 2021).

An individual with more self-determined motivational tendencies is more likely to pursue an intrinsic goal (receive a positive score on the GCRQ), but this is not always the case. In the context of the goal examples above, a person might pursue the goal of running a 10km race in 50 minutes for a self-determined motive such as challenging oneself to hit a personal best or a non-self-determined motive such as beating a friend in a competition. Alternatively, an extrinsic goal such as looking more attractive in a swimsuit could be undertaken for more self-determined motives (looking my best is important to me because I want to feel confident in my body) or less self-determined motives (I want to look attractive on the beach this year to impress my significant other). As demonstrated in these examples, motives and goals are closely connected but distinctly different concepts.

Goal Framing within Messaging from an SDT Perspective

Messaging research guided by SDT is limited and has mainly focused on messages delivered verbally, and in a classroom setting (Vansteenkiste et al., 2005). For example, Vansteenkiste and colleagues (2005) conducted a study of SDT based messages on early adolescent's academic achievements. In this study, students were given reading prompts regarding the goals of healthy eating and were presented with either intrinsically framed goals (focused on health) or extrinsically framed goals (focus on physical attractiveness/weight loss). Students were asked to read the instructions, then read the prompt, and finally complete a survey regarding what they remembered about the prompt and their intentions to eat healthy in the future. Key findings from this study demonstrated that extrinsic goal framed messages promoted memorization and reduced behavioural commitment while messages with intrinsically framed goals promoted deeper conceptual learning and increased behavioural persistence (Vansteenkiste et al., 2005).

Similar findings were described in a 2007 study of SDT framed goal messaging regarding pro-environmental behaviours (Pelletier & Sharp, 2007). This study used messaging that contained either intrinsically or extrinsically framed goals related to pro-environmental behaviours such as recycling in a neighbourhood program and investigated how this messaging translated to behaviour through the collection of the neighbourhood's recyclables and trash (Pelletier & Sharp, 2007). Similar to the findings of Vansteenkiste et al. (2005), this research found that intrinsically framed goals were more likely to promote the desired behaviour change when compared to extrinsically framed goals (Pelletier & Sharp, 2008). More recently, the CMSSBC, which represents the current most comprehensive messaging strategy for sustained behaviour change, strongly advocates message framing that endorse self-determined motives and intrinsic goals in order to elicit benefits such as those outlined above (Pope et al., 2018). From this point forward, this thesis will leave behind motives and focus in on goals, more specifically intrinsic and extrinsic goals.

Outcomes of Intrinsic Versus Extrinsic Goals

A key point made within SDT is that "all goals are not created equal" (Ryan et al., 1996, p.7). While setting goals plays an important role in motivation, particularly in the exercise context (Swann et al., 2021), not all types of goals are linked to beneficial personal outcomes such as well-being (Vansteenkiste et al., 2006). SDT distinguishes intrinsic goals, those that are more closely related to the fulfillment of basic psychological needs, from extrinsic goals that are related to "substitute needs" which are not essential to well-being or personal development (Deci & Ryan, 2000; Teixeira et al., 2012). Research in the education setting has explored the outcomes of different goal pursuits, finding that intrinsic goals have been positively associated with well-being, conceptual learning, and persistence, and negatively associated with ill-being

such as depression and anxiety (Vansteenkiste et al., 2004; Vansteenkiste et al., 2006; Vansteenkiste et al., 2008). Conversely, the pursuit of extrinsic goals has been associated with route memorization, lessened task involvement, increased incidence of ill-being and negatively associated with basic psychological need fulfillment (Vansteenkiste et al., 2004; Vansteenkiste et al., 2006; Vansteenkiste et al., 2008). Similarly, intrinsic but not extrinsic goals have been associated with greater job-based satisfaction and less emotional exhaustion in the workplace (Vansteenkiste et al., 2007a). It is important to note that in the studies discussed in the paragraph above intrinsically or extrinsically framed goals were imposed by the researcher limiting the ability of these results to be extrapolated to a real world setting in which message recipients have a choice in the goals they peruse.

Research exploring goal pursuits is somewhat limited in the exercise context, but in other contexts research has generally shown that intrinsic goals are positively related to elevated levels of well-being and autonomous motivation (Johnson & Buzinde, 2021). Early studies that compared intrinsic goals relative to extrinsic goals found that intrinsic goals were positively associated with exercise engagement, physical self-worth, and psychological well-being, and negatively associated with feelings of anxiety, even when controlling for participants self-determined motivation towards exercise (Sebire et al., 2009). These results were replicated in a 2018 study of CrossFit athletes which found that the pursuit of intrinsic goals predicted greater basic psychological need satisfaction, exercise frequency, and higher levels of intrinsic motivation (Sibley & Bergman, 2018). Intrinsic goals have also shown to be related to more self-determined forms of motivation (possibly mediated by basic need satisfaction) while extrinsic goals have been linked to less self-determined forms of motivation (Lindwall et al., 2016). A systematic review of exercise and PA from an SDT perspective found that intrinsic exercise

goals were associated with greater exercise participation, with the exception of intrinsic goals related to health and fitness (Teixeira et al., 2012). Health and fitness goals were found to demonstrate no association with exercise significantly more often than either a positive or negative association (Teixeira et al., 2012). The authors suggest that this may reflect the complicated motives behind health and fitness goals such a drive for thinness (non-self-determined) or a drive for general health or increased vitality (self-determined) thus making it difficult to categorize health and fitness goals as intrinsic or extrinsic (Teixeira et al., 2012). The authors articulated that intrinsic goal pursuits should be fostered in relation to exercise. Intrinsic versus extrinsic goal pursuits have also been explored in relation to performance. Extrinsic goals, compared to both intrinsic goals and a no-goal control condition, have been shown to undermine performance while intrinsic goals increased performance in an exercise task compared to no-goal controls (Vansteenkiste et al., 2007b).

In summary, the pursuit of intrinsic goals has shown a clear association to many beneficial outcomes such increased exercise engagement, basic psychological need fulfillment, self-determined forms of motivation and psychological well-being. In contrast, the pursuit of extrinsic goals have been linked to more negative outcomes over the long term such as depression and anxiety, less self-directed forms of motivation, and weakened behavioural commitment. However, these negative outcomes can be avoided if an individual transitions to more intrinsic goals overtime.

With an understanding of intrinsic and extrinsic goals, as well as the many advantageous outcomes of intrinsic goal framing, there is a clear consensus that messages should be framed to endorse intrinsic rather than extrinsic goals (Pope et al., 2018; Teixeira et al., 2012). That said, the benefits of increased well-being, performance, and exercise persistence, as well as decreased

feeling of anxiety can only be obtained if the general population perceives messages advocating intrinsic goals as they are intended to be perceived (intrinsically). Unfortunately, current research has shown that this may not be the case, as evidenced by messaging researchers advocating the use of manipulation checks to be included in research design and analysis which ensure that messages are perceived as intended (Pope & Pelletier, 2021).

Intrinsic Versus Extrinsic Goal Perceptions

A 2011 study conducted by McLachlan and Hagger demonstrated the potential problematic misinterpretations of goals between the general population and goal pursuit researchers. The authors employed a two-part study design to test whether adults could differentiate between intrinsic and extrinsic goals for PA in both implicit and explicit conditions. Implicit perceptions and attitudes can be described as fast and unconscious and arise from automatically activated associations, while explicit perception can be described as slow, involving conscious thought, and rely on reasoning (or the reasoning of others) about the relationship between objects (Evans, 2008).

In the first part of this two-part study, university-aged psychology students were asked to freely generate a list of goals one might have while participating in leisure time PA, without being informed of the distinction between intrinsic and extrinsic goals or a definition of "goals' themselves (McLachlan & Hagger, 2011). A sub-group of these participants was then asked to categorize the goals they had generated as either intrinsic or extrinsic. Participants in this sub-group were presented with two definitions to base their categorizations on, specifically intrinsic goals defined as "*participating in the behavior for reasons of interest, enjoyment, or satisfaction"* and extrinsic goals defined as *"participating in a behavior for external rewards or outcomes, such as gaining approval from others."* (McLachlan & Hagger, 2011). Upon

completion of this task, the goal lists generated by participants (including the sub-group) were categorized by two independent raters who were both experts in SDT (an explanation of what defined an SDT expert was not provided; McLachlan & Hagger, 2011).

Generated goals were analyzed using a clustering method originated by Trafimow and Sheeran (1998) as a tool to distinguish between theoretical constructs in social psychology. Clustering uses a mathematical calculation to determine whether a concept was grouped according to type (whether the words generated were grouped by goal type in the above study) at rates higher than chance. Results of this study demonstrated clustering in the freely generated goals (grouping by goal type at higher than chance rates), with 22% of participants demonstrating perfect clustering (all intrinsic/ extrinsic goals grouped together) and a mean cluster score which differed significantly from chance t (97) = 2.19, $p < .05$, $d = 0.44$ (McLachlan & Hagger, 2011). Goals were categorized as "clustered" according to the two SDT experts' classifications of the generated goal words; intrinsic or extrinsic (McLachlan & Hagger, 2011).

In the sub-group of participants who were asked to categorize their goals as either intrinsic or extrinsic, participants encountered difficulties in reliably categorizing goals (as determined by the SDT experts). Goals which often differed from the SDT experts' categorization were those related to winning competitions, relieving boredom or preventing other distractions which were ladled as intrinsic (McLachlan & Hagger, 2011). Goals related to health, fitness and social interaction were often ladled as extrinsic (McLachlan & Hagger, 2011). The results related to participants perceptions of health and fitness goals differing from those of SDT experts support the finding of Teixeira and colleagues discussed above and may provide evidence for a more complicated view of body-focused goals than is currently theorized within

SDT (Teixeira et al., 2012). What a closer look at the definitions above will reveal is that the definitions presented to participants represented self-determined and no self-determined motivation (why) as opposed to what the participants were categorizing (what/goals). The authors note that the findings may have resulted from the motivational regulation underlying these goals differing among individual participants, a complication caused by providing the definition of motivation to the participants as opposed to the definition of goal (McLachlan & Hagger, 2011). The authors do address this inconsistency in a note at the end of the study by saying that the definitions for motivation were provided instead of goals because the provision of definitions and examples of intrinsic and extrinsic goal content have led to systematic biases in their coding of goals (McLachlan & Hagger, 2011).

In the second part of this study, the goal words generated by participants in study one which were categorized by SDT experts were presented to a new group of participants. Intrinsic goal words in this section were "physical fitness, good health, enjoyment, social interaction, enhance self-esteem, develop friendships, reduce stress, improve skills". Extrinsic goal words were "weight loss, physical attractiveness, toned body, impress others, win awards, satisfy competitive desires, relieve boredom, and build muscle" (McLachlan & Hagger, 2011). Words were alternated to ensure that two words of the same goal type (as coded by the SDT experts) were not presented consecutively. Participants were asked to read the list of goals and consider how each goal may apply to their own leisure-time PA. Following this review of the goal list, participants were asked to indicate on a Likert scale from one to seven how frequently they would engage in PA in their leisure time during the following month (McLachlan & Hagger, 2011). After completing the above questions participants were presented with a distraction task (asked to write about their most recent holiday), then they were asked to freely generate as many

goals as they could remember seeing in the original questions. Results showed that 29.8% of participants in this group displayed perfect clustering, meaning the participants recalled all intrinsic then all extrinsic goals or vice versa, (recalled goals were grouped according to the SDT experts' categorization of the words) and the mean clustering score differed significantly from chance, t (103) = 2.49, $p < .05$, $d = 0.49$. (McLachlan & Hagger, 2011). These results indicate that the participants in this study were implicitly differentiating between intrinsic and extrinsic goals as evidenced by the order in while they recalled the goals from the task. This is relevant to the current study as it provides preliminary evidence that although the general population may not be aware of the definitions of intrinsic and extrinsic goals, they are aware of the difference on an implicit or unconscious level. Finally, the authors concluded that while young adults implicitly understand the difference between intrinsic and extrinsic goals in the PA context, they struggle to categorize these types of goals correctly at better than chance odds (McLachlan & Hagger, 2011). This finding will be further explored in the current study through explicit tasks.

The results described in the above study suggest that it may be of value to gain a deeper understanding of what the general population considers to be an intrinsic versus and extrinsic goal, given a more rigorous approach that aligns with the conceptual definitions. The above study was not able to accurately answer this question likely because participants were presented with the definitions for motives and not goals- given that motivation and goals are fundamentally different concepts. Therefore, providing the definitions of motivation certainly would yield problematic results. Finally, the authors call for additional methods to be used in future research to explore individual ability to discriminate between intrinsic and extrinsic goals (McLachlan & Hagger, 2011). This suggestion and the above study as a whole provide an interesting line of questioning, specifically, given the definition of intrinsic and extrinsic goals, rather than motives,

how would participants differentiate between intrinsic and extrinsic goal types? And what other underlying factors may impact an individual's perception of a goal as intrinsic or extrinsic?

Gender Differences in Goal Perceptions

Gender may be one such factor which plays a role in an individual's perception of goals. Gender differences in perception have been explored widely, with research topics spanning differences in the perception of alcohol and drug use (Spigner et al., 1993), teaching and learning mathematics (Samuelsson & Samuelsson, 2016), advertising (Birknerová et al., 2018), severity of corruption (Bauhr & Charron, 2020), public transit (Yavuz, 2021), and most recently perceptions of risk in the Covid-19 pandemic (Rodriguez-Besteiro et al., 2021) just to name a few. Despite the immense variance in application, gender differences in perception consistently been reported, at least to come extent.

Gender differences generally within exercise psychology have been a popular topic of inquiry, yet much of this research has explored gender differences in topics such as body image, emotion, and self-worth. For example, research has shown that when compared to men, women on average have lower levels of exercise participation and self-worth, and significantly higher levels of exercise anxiety (Sebire et al., 2009). Even in school aged children, girls were found to experience greater social physique anxiety and perceived pressure to lose weight than boys (Gillison et al., 2006). The same study also described girls more often than boys reporting extrinsic goals for exercise such as weight control or body tone (Gillison et al., 2006). The authors attributed the girls' negative body image to external forces such as media (Gillison et al., 2006). The connection between body image and media has only intensified over time with the widespread adoption of social media (Fardouly & Vartanian, 2016). In their exploration of social media use and body image Fardouly and Vartanian (2016) found that social media use was

consistently and positively associated with the development of negative body image. These authors are not alone in this finding, as it has long been argued that gender is a socialized phenomenon, with social contexts both reflecting and perpetuating gender roles (Leaper & Farkas, 2015). Given the importance SDT places on the social environment, and the extent to which that environment supports or thwarts the basic psychological needs (Deci & Ryan, 2000), gender as a socialized phenomenon may explain the impact of gender on the central psychological tenants of SDT, motivation, and goals.

Despite clear gender differences having been established within the exercise psychology literature, exploration of gender differences in relation to goals, and particularly goal perceptions is lacking. Given this fact, gender differences in relation to motivation provide possible insight into gender differences in goals. In a 2012 meta-analysis performed by Teixeira and colleagues explored the effects of gender in the relationship between introjected regulation (motivation behind a behaviour related to feelings of "must or "should") and PA. They reported that introjected regulation was positively associated with exercise behaviour among women whereas in men, the association was either negative or non-existent (Teixeira et al., 2012). A study of gender differences of college aged students' PA levels found that male students had significantly higher levels of PA and also significantly higher levels of intrinsic motivation compared to women (Lauderdale et al., 2015). A second meta-analysis exploring gender orientations in relation to SDT motivation orientations found that scores for men and women did not differ significantly from one another for any of the five motivation regulations (external, introjected, identified, integrated, and intrinsic; Guérin et al., 2012).

Within behaviour change messaging literature specifically, research on gender differences is limited and focused on the behaviour itself, such as variation in risky driving

(Rhodes & Pivik, 2011) or HIV disclosure (Geary et al., 2014), by gender, not the perceptions of messages related to the behaviour change. The research that does exist on behaviour change messaging has explored individuals' perceptions of message preference and persuasiveness. One study in this area found that women generally ranked intrinsic messages as more preferable than men (Pope & Pelletier, 2021). Although these results were only significant for certain portions of the messages, the authors advocate for further research in the areas of messaging and gender differences (Pope & Pelletier, 2021). While not directly related to the perception of goals, taken together, the research described here provides some evidence of gender differences in the preference for goal framed messages. Given the potential benefits and consequences of goal perception, substantiate investigating further in this context.

Goal Orientation and The Regulatory Fit Theory

A second key factor that may impact an individual's perception of a goal is their goal orientation. Goal orientation can be conceptualized as the goals an individual sets for themselves, in this case specifically related to exercise and PA. The relationship between the message goal frame and a message recipient's goal orientation has recently been explored (Pope et al., 2018; Pope et al., 2021) through the context of the Regulatory Fit Theory, a theoretical framework developed by Higgins (2000). This theory considers how one thinks and feels about decisions while making them and after having made them, by considering the "fit" (regulatory fit) between an individual's goal orientation and the information they are receiving. This theory has five major assumptions: 1) individuals will be more inclined towards goals with higher regulatory fit, 2) motivation during goal pursuit will be higher when regulatory fit is higher, 3) feelings regarding a choice will be more positive for a desirable choice and more negative for an undesirable choice when the regulatory fit is higher, 4) retrospective evaluations of decisions will

be more positive when regulatory fit is higher, and 5) individuals will assign higher value to objects chosen with higher regulatory fit (Higgins, 2000). For the purposes of this research, only the first three assumptions need be considered as the last two assumptions focus on retrospective evaluation and physical objects.

The use of Regulatory Fit Theory in health promotion messaging has been explored as a message design strategy to increase the adoption, or maintenance of health behaviours. One such study explored the Regulatory Fit Theory through gain and loss framed nutritional information and regulatory focus. Regulatory focus can be conceptualized as the accessibility of an individual's "ideal" self (promotion-related) and "ought" self (prevention-related; Higgins et al., 1997). Spiegel and colleagues (2004) found that participants in the regulatory fit condition (when the message frame was matched to participants regulatory focus) ate 20% more fruits and vegetables over the following week than those in the non-regulatory fit condition (when the message frame presented did not match the participants regulatory focus; Spiegel et al., 2004). Additionally, a study by Glowacki and colleagues (2020) presented a group of college aged students with text messages that were congruent (fit) or non-congruent with their regulatory focus (gain versus loss framed) related to reducing high-risk drinking. Findings from this study demonstrated that health messages mismatched to the message recipient's regulatory focus were more likely to consume a higher quantity of drinks that participants in the contingent or control group (Glowacki, et al., 2020). In this case, because alcohol consumption was a negative behaviour these findings also support the Regulatory Fit Theory much like the study by Spiegel (2004).

As discussed previously, message framing is only one of two techniques being utilized in the studies described above to manipulate a messages effectiveness. While message framing

focuses on how information in the message is conveyed generally (gain or loss framed), message tailoring focuses the information based on one or more personal characteristics of the message recipient, such as age or gender (Pope et al., 2018). Message tailoring has received empirical attention, specifically future research exploring tailoring a message's content to fit a recipient's goal orientation was suggested by Pope and colleagues (2018) and was explored further by Lee and Pounders (2019). Results reported by Lee and Pounders (2019) supported tailoring messages intrinsically (as opposed to extrinsically) when a participant's independent self-construal (the extent to which the self is defined independently or interdependently of others) was accessible. The benefits (persuasiveness and behavioural intention) of intrinsic goal framing were lessened in those with an interdependent self-construal (Lee & Pounders, 2019). These results indicated that framing messages intrinsically was not universally beneficial but that benefits varied dependent on how the reader's sense of self was defined (Lee & Pounders, 2019). Prior to the recommendation by Pope and colleagues (2018), Gallagher and Updegraff (2011) explored message framing to promote PA proposing that the effectiveness of gain and loss framed messages related to the type of exercise outcomes (intrinsic or extrinsic) emphasized in the message, finding that messages that matched the message frame to the exercise outcomes only increased exercise behaviour in participants with a high need for cognition (one's tendency to engage in effortful thinking; Gallagher & Updegraff, 2011). Again, similarly to the findings of Lee and Pounders (2019) the benefits of message framing (increased exercise behaviour) were mediated by a second variable, in this case the need for cognition in message recipients.

Recently, Pope and colleagues (2021) found that participants were more likely to freely choose to read a PA message when the goal frame of the message fit their goal orientation in comparison to when it did not. Interestingly, this finding did not translate to performing an

optional behaviour change task (worksheet) embedded within the message (Pope et al., 2021). Overall, the Regulatory Fit Theory and limited findings discussed above suggest that messages that fit a recipient's goal orientation may be preferred and be perceived as more persuasive by readers. However, results remain mixed regarding the Regulatory Fit Theory's ability to lead to behaviour change with factors such as self-construal and need for cognition complicating the process. To date no studies have explored how message recipients goal orientation may impact a reader's perceptions of exercise goals as intrinsic or extrinsic.

Purpose

As discussed above, very limited research exists in the area of intrinsic and extrinsic goal framed exercise promotion messaging. One possible explanation for this lack of research could be that no validated word bank exists for intrinsically and extrinsically framed health promotion messaging research and prior to the current study no research had explored the general population's perceptions of exercise goals. This poses a significant confounding variable for messaging research attempting to study the effectiveness and related outcomes of different types of goal framing such as behaviour change over time and psychological well/ill being. The overarching goal of the current research was to provide an understanding of participant's perceptions of exercise goal words from which messaging researchers and message designers alike could use to test and communicate persuasive exercise messages. To the best of our knowledge, an investigation of the general populations' perception of exercise goal words has yet to be undertaken. Due to the lack of previous research in participant's perceptions of health promotion goals, manipulation checks are commonplace in messaging research. These checks are intended to ensure that participants perceive the messages according to the frame they were intended to represent (Pope et al., 2021; Pope & Pelletier, 2021). Manipulation checks can be

performed by following the experimental prompt (the message) with a Likert style question asking the participant to indicate the extent to which the content they viewed represents intrinsically or extrinsically framed content with a given definitions and examples (Pope et al., 2021). Pope and colleagues (2021) used such a manipulation check in their study of intrinsically versus extrinsically framed PA messages. Using a 7-point Likert scale ranging from 1 (not at all) to 7 (completely), participants scored the messages an average 4.76/7.00 ($\overline{x}$ = 3.68; SD = 1.73 to $\overline{x}$ = 5.26; SD = 1.68). Further investigation into the means indicated that although all messages were perceived to represent the intended frame significantly more than the unintended frame, there was clearly some division between the intended frame of the message and how it was perceived by participants in the study. Similar results were reported in Pope and Pelletier (2021) who reported a 4.95/7.00 (M_{range} = 4.49[SD = 1.51] to 5.43[SD = 1.40]) and strongly advocated for manipulation checks in future studies comparing intrinsic versus extrinsic messages in order to account for the possible differences in perspectives between messaging researchers and message recipients.

When viewed through the context of McLachlan and Hagger's (2011) findings, these very recent studies (Pope et al., 2021; Pope & Pelletier, 2021) highlight an area of concern for message designers and messaging researchers alike. In order to create messages and messaging research which foster intrinsic goals linked to well-being and increased physical performance, message designers must be confident that recipients are perceiving framed exercise goals as they are intended to be perceived. This was the gap the current research aims to address. While this research was focused on the exercise domain, many of the words validated (such as goals, value, satisfaction, shame, reward, and pressure) could also be applied to other areas of health promotion research.

Given the aforementioned pitfalls of previous literature, the current study sought to answer two main research questions, each with one to two corresponding sub-questions. Research question one was as follows; (1) is there a difference in adults' perception of exercise goal words as either intrinsic or extrinsic? and further examined with the sub-question (1a), do SDT researchers differ from the general population in their perception of exercise goal words as intrinsic or extrinsic? Building on the findings of McLachlan and Hagger (2011) as well as the documented need for manipulation checks in messaging research as described above, it was hypothesized that differences in perception of exercise goal words would be observed in both the general adult population as well as when comparing general adults to SDT experts. Secondly, this study sought to answer the main research question; (2) do personal characteristics play a role in how adults classify exercise goal words? This research question had two sub-questions; the first of which asked (2a) is there a difference in exercise goal word perception between those with an intrinsic goal orientation and those with an extrinsic goal orientation? While the second sub-question asked (2b) is there a difference in exercise goal word perception between those who self-identify as women and those who self- identify as men? Based on previous research findings of differences in message preference and behavioural outcomes between men and women as well as message recipients with differing goal orientations, it was hypothesized that there would be differences in perception found in both question 2a and 2b. That said, due to the experimental nature of this research and a lack of previous empirical study on adults' perceptions of exercise goal words the magnitude and direction of this difference, as well as the goal words where this difference may be present could not be hypothesized.

Materials and Methods

Participants

Expert Population

A list of potential expert participants in the field of SDT was generated. Experts selected had a background or published work in the PA context, with an emphasis on goals and/or motivation. Inclusion criteria for this study was (a) over 18 years of age, (b) academic rank of at least instructor, with preference given to assistant professors, associate professors, or full professors, (c) must hold a masters or Ph.D. in kinesiology, psychology, or a related discipline, (d) either currently employed by a university or retired from an accredited university within the last 15 years. With this inclusion criteria in mind, a list of 41 names plus corresponding contact information was generated. Experts were recruited through publicly available modalities including the international scholars section of the SDT website (https://selfdeterminationtheory.org/faculty/), personal contacts of the primary investigator's supervisor, faculty directories, Research Gate, and the primary author correspondence information from publications of interest. A secondary follow up email was sent to all participants 2 weeks following the initial contact date.

Ethics approval was obtained from the University of Lethbridge Human Participant Research Committee (approval #2021-004). Of the 41 expert participants contacted, a total of 14 participants completed the survey. One participant was removed due to incomplete data leaving thirteen participants for analysis (n = 13). Participants included 7 women and 6 men, with a mean age of 47.46 years (SD = 10.63). All participants held a doctorate degree in kinesiology, psychology, or a related discipline such as health sciences, with eight participants currently employed with an academic rank of assistant professor or higher (Assistant Professor, n = 1;

Associate Professor *n* = 1; Professor *n* = 6; Other *n* = 6). Experts who selected other (*n* = 6) as their current position were either of plausible retirement age or are known to be currently working in a non-university setting such as with non-profit organizations. Experts self-reported their main area of research as values and goals (*n* = 1), behaviour change related to exercise or wellbeing (*n* = 2), health psychology (*n* = 3), PA promotion (*n* = 3), and human motivation (*n* = 4). Participants were also asked to self-report the number of publications they had in each of the following categories: (a) "Scale Development", 0-3 (*n* = 7), 4-6 (*n* = 3), 7-10 (*n* = 1), 10+ (*n* = 2); (b) "Goals or Goal Content from a Self-Determination Theory Perspective", 0-3 (*n* = 9), 4-6 (*n* = 1), 7-10 (*n* = 1), 10+ (*n* = 2); (c) "Motivation from a Self-Determination Theory Perspective", 0-3 (*n* = 3), 4-6 (*n* = 0), 7-10 (*n* = 4), 10+ (*n* = 6); (d) "Research in the Physical Activity Context Guided by Self-Determination Theory", 0-3 (*n* = 3), 4-6 (*n* = 2), 7-10 (*n* = 4), 10+ (*n* = 4); and (e) "Generally Using Self-Determination Theory as the Guiding Theory", 0-3 (*n* = 2), 4-6 (*n* = 2), 7-10 (*n* = 2), 10+ (*n* = 7).

General Population

Participants were recruited through various social media modalities including Facebook, Twitter, Reddit, Tiktok and Instagram as well as through in-class presentations at the University of Lethbridge. After providing informed consent, individuals were eligible to participate if they met the following inclusion criteria: (a) between the ages of 18 to 65 (born in 1956 or later) years of age, (b) able to read and understand English fluently, and (c) have the visual capability to complete an online survey. Of the 470 participants who completed the survey, participants were removed because they (a) completed the survey in under 480 seconds (*n* = 121); (b) completed the survey time in over 7200 seconds (*n* = 6); (c) the response indicated a lack of English comprehension (*n* = 10); (d) the response was irrelevant or indicated a lack of task

comprehension (n = 19) and/or (e) did not meet the inclusion criteria for age (n = 1). This resulted in a remaining sample of 313 adults (n_{men} = 123, n_{women} =188, $n_{other/missing}$ = 2) aged 18-65 ($\bar{x}$ = 39.81; SD = 12.19) years of age. Participants were asked to self-report their height and weight in pounds which were subsequently used to calculate a body mass index score (BMI; $\bar{x}$ = 26.48; SD = 7.09). Participants self-identified as Caucasian (n = 231), Hispanic (n = 40), Asian (n = 24), Black (n = 19), Indigenous (n = 11), or another option not listed (n = 1). Participants self-reported their highest level of education as less than grade 8 (n = 2), grade 8 (n = 1), high school (n = 41), college degree/diploma (n = 90), university undergraduate degree/diploma (n = 109), university graduate degree (n = 68), or prefer not to disclose (n = 2). Finally, participants were classified as insufficiently active/sedentary (n = 28), moderately active (n = 31) and active (n = 209) using the classification set out by Godin (2011) on their self-reported moderate and vigorous PA[1] on the Godin Leisure time Questionnaire (Godin & Shephard, 1985).

Measures

Behavioural Regulation in Exercise Questionnaire

The Behavioural Regulation in Exercise Questionnaire Version 3 (BREQ-3: Markland & Tobin, 2004; Wilson et al., 2006) is a multidimensional measure of the extent to which exercise motivation is more or less self-determined based on the motivational continuum of SDT (Deci & Ryan, 1985; Deci & Ryan, 2002). The BREQ (in all its iterations) has been used extensively to study participants motivation towards exercise (Coniglio et al., 2021; Lindwall et al., 2019; Markland & Tobin, 2010; Rodrigues et al., 2020; Sebire et al., 2009) and is currently on its fourth iteration (Lindwall et al., 2019). The most recent English language validation of the

[1] The self-reported number of times participants were active in a given week at the moderate and vigorous level were multiplied by five and nine respectively as per Godin and Shephard (1985). These multiplied values were then summed to create a composite PA score.

BREQ was completed on the BREQ-2 by Markland and Tobin (2004). The BREQ-2 is a 5 factor 18 item survey which was validated using confirmatory factory analysis. Results from this validation study found that the hypothesized 5-factor model did not differ significantly from the data and all fit indices indicated an excellent fit (RMSEA = .02, 90% CI = .00–.04; CFI = .95; NNFI = .94; SRMR = .05; Markland & Tobin, 2004).

The current study utilized the third iteration of this questionnaire (BREQ-3; Cid et al., 2018; Markland & Tobin, 2004; Wilson et al.,2006) due to is wide usage in other research of this nature and demonstrated validity (Cid et al., 2018). The BREQ-3 is composed of six subscales (amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation) with four items per subscale for a total of 24 items. Following the stem "Why do you engage in exercise?", participants were asked to indicate the degree to which each item was suitable for them using a Likert-scale that ranged from 0 (Not true for me) to 4 (Very true for me). Example items include "I don't see why I should have to exercise" (Amotivation), "I exercise because other people say I should" (External Regulation), "I feel guilty when I don't exercise" (Introjected Regulation), "It's important to me to exercise regularly" (Identified Regulation), "I exercise because it is consistent with my life goals" (Integrated Regulation), and "I exercise because it's fun" (Intrinsic Regulation; Markland & Tobin, 2004; Wilson et al., 2006). In the current study, the BREQ-3 was only completed by the general population participants.

The most frequently cited inquiry into the reliability and validity of the BREQ-3 was completed with a Portuguese sample completed by Cid and colleagues (2018). This study found that the original model (six factors; 24 items) did not fit to the data in a satisfactory way (χ^2 = 977.49; df = 237; B-S $p < 0.001$; SRMR = 0.07; NNFI = 0.80; CFI = 0.83; RMSEA = 0.08; 90%

CI = 0.08–0.09). The authors removed one item from each factor (six factors; 18 items) to obtain a more satisfactory model fit (χ^2 = 254.08; df = 120; B-S $p < 0.001$; SRMR = 0.04; NNFI = 0.93; CFI = 0.95; RMSEA = 0.06; 90% CI = 0.05–0.06). Factorial validity was present for all items, with factor loadings ranging from 0.50 to 0.78 (amotivation); 0.68 to 0.82 (external regulation); 0.63 to 0.78 (introjected regulation); 0.62 to 0.78 (identified regulation); 0.64 to 0.78 (integrated regulation); and 0.70 to 0.71 (intrinsic motivation; Cid et al., 2018).

Although the BREQ-3 was completed by general population participants and is described here as a measure, it relates to motivation and not goals and as such was not included in the data analysis, results, or discussion of this thesis. The BREQ-3 was included in the current study to increase rigor in the study and to act as a confirmatory resource should there be any concerns regarding the results of the goal content for exercise questionnaire.

Godin Leisure Time Exercise Questionnaire

The Godin Leisure Exercise Time Questionnaire (Godin & Shephard, 1985), which was only completed by the general population participants in the current study, consists of two items. The first item asks participants to indicate how often they engage in mild (minimal effort), moderate (not exhausting), and strenuous exercise (heart beats rapidly) for at least 15 minutes at a time over an average 7-day period. The second item asks participants to consider a typical 7-day period and reflect upon how often they engage in any regular activity long enough to work up a sweat during their leisure time. The response options for the second item are often, sometimes, or never/rarely. First and second item responses are then multiplied by a corresponding Metabolic Equivalent of Task (MET) value (3, 5, and 9 for mild, moderate, and strenuous intensity, respectively) and summed to create an overall score (Godin & Shephard, 1985).

The Godin Leisure Exercise Time Questionnaire has been used extensively in the area of exercise and PA research since its inception and continues to be a popular choice for emerging adult and adult samples such as those in this study (Babenko et al., 2018; Ozturk, & Unver, 2020; Rhodes et al., 2020; Sabiston et al., 2019; Sikes et al., 2019). In a 2015 study, the Godin Leisure Exercise Time Questionnaire demonstrated test-retest reliability (temporal stability) over a 15-day period (k = 0.65 [95% CI = 0.34–0.96]), and criterion validity based on other measures of leisure time PA such as VO_2 max (η^2 = 0.11), percentage of body fat (η^2 = 0.005), and electronic records of fitness centre attendance (η^2 = 0.13; Amireault, & Godin, 2015). The results of this study found that the questionnaire could reliably classify healthy adults as insufficiently active or sufficiently active with a moderate to large effect size (d = 0.77; Amireault, & Godin, 2015).

Goal Content for Exercise Questionnaire

The Goal Content for Exercise Questionnaire (Sebire et al., 2008), which was completed only by the general population participants, was used to measure participant goal orientation. This questionnaire is based on early research in goal content from an SDT perspective in a broader life context (Deci & Ryan, 2000; Kasser & Ryan, 1993, 1996). The questionnaire consists of 20 items evaluated on a 7-point Likert scale that varies from 1 (Not at all important) to 4 (Moderately important) to 7 (Extremely important; Sebire et al., 2008). These items are divided into five subscales, three intrinsic (α = .87), health management, skill development, and social affiliation, and two extrinsic (α = .84) social recognition and image (Sebire et al., 2008).

The GCEQ has demonstrated evidence of factorial validity ($\chi^2(160) = 452.65$, $p < .001$; CFI = .94; SRMR = .07; RMSEA = .06 (90% CI = .06 to .07)) as well as gender invariance (males: $\chi^2(160) = 237.77$, $p < .001$; CFI = .96; SRMR = .06; RMSEA = .06 (90% CI = .04 to

.08), females: $\chi 2(160) = 276.26$, $p < .001$; CFI = .95; SRMR = .06; RMSEA = .07 (90% CI = .05 to .08; Sebire et al., 2008)). Cronbach's alpha coefficients for the five subscales ranged from .75 to .92 (Sebire et al., 2008). Evidence of criterion validity was demonstrated through moderate positive correlations between intrinsic goals and autonomous motivation ($r = .48$) and extrinsic goals and controlling regulation ($r = .42$) as measured by the BREQ (Sebire et al., 2008).

Definition and Word Generation

Definition Generation

Definitions for both intrinsic and extrinsic goals were drafted based on the seminal work of Ryan and Deci (2000) and the work of experts in this area (Kasser & Ryan, 1996; McLachlan & Hagger, 2011; Sebire et al., 2008). These definitions were written in lay-person language with the intention that they could be understood by a general audience. Definitions included concrete examples to clarify understanding such as, money, relationships with close family, enjoyment, or guilt. In total, three iterations of each definition were exchanged between the primary investigator and supervisor with adjustments being made to each version. Once drafted, definitions were sent to two SDT experts, who have published original research in scale development in the area of PA and sport for review. Experts reviewed the definitions and responded with input and edits. These edits were addressed by the authors and were resubmitted to the experts at which point they were approved by all parties. Table 1 includes the original definitions of goals sent to the experts as well as the final agreed upon definitions. Also included in Table 1 are two measures of readability for the final definitions, the Flesch reading ease score (Flesch, 1948) and Flesch-Kincaid grade level score (Kincaid et al., 1975). The Flesch reading ease score is measured from 0-100, with lower numbers indicating increased reading difficulty (a score of 10-30 indicating information best understood by university graduates), and higher

numbers indicating increased ease of reading (a score of 60-70 indicating a United States school level of eighth or nineth grade; Flesch, 1948). Alternatively, the Flesch-Kincaid grade level test uses the same core measures as the Flesch reading ease test (word length and sentence length) but with different weighting factors to obtain a score that corresponds with the United States grade level classification (Kincaid et al., 1975). That said, due to the nature of the formula used for this calculation, there is no upper bound for scores produced by this test (Kincaid et al., 1975).

Word Generation

An initial word list of 145 items was generated by the researchers. Potential items were sourced from scales developed in the area of motivation and goals, such as the GCEQ (Sebire et al., 2008), as well as experimental research in the area of goals and motives (Kasser & Ryan, 1996; Lee & Pounders 2019; McLachlan & Hagger, 2011). This list was then refined down to 117 items by eliminating repetitive words (see Table 2). Some words were removed (ex. Winning) if the root was already listed (ex. Win) to reduce redundancy.

Procedure

Data Collection

Expert Population

Following ethics approval from the University of Lethbridge Human Participant Research Committee (approval #2021-004), participants were contacted through email and were presented with a brief overview of the study, an invitation to participate, and an anonymous study link. Following an informed consent process, demographic information was collected. Information collected included age and gender identity, main area of research, and the number of journal articles the participant had published. Participants were then presented with questions to ensure the inclusion criteria was met including highest level of education achieved, and current academic rank.

Upon completion of the demographics section, expert participants were presented with the definitions of goals (intrinsic, extrinsic) created through the aforementioned methods, and were asked to use those definitions to evaluate the exercise words. The 117 words (Table 2) were randomized using a research randomizer into nine blocks of 13 words each. For each participant, the order of the words within each block was randomized. The order of the blocks was also randomized such that each participant viewed them in a different order to eliminate potential response order effects (Galesic et al., 2008). Taken together, these three layers of randomization led to a unique word order for each participant.

Each block of 13 words was presented on its own page with the definitions of both intrinsic and extrinsic goals (Table 1) at the top of the page in bold font for participants to review. A drop-down menu was presented next to each word, and experts were asked to evaluate the word in terms of how it related to the definitions and to select one option. The possible

options for the drop down menu were *Intrinsic, Extrinsic, Could be either Intrinsic or Extrinsic, Neither Intrinsic nor Extrinsic*. Following each block of 13 words, participants were given the opportunity to include any feedback they had regarding the words in the block, including but not limited to, word length and level of reading difficulty. This process was repeated until participants had completed all nine blocks.

Once all blocks were completed, participants were presented with a final question regarding whether there were any words not currently included in the word bank which should be included. After answering this final question, participants were redirected to a new survey window which asked them two questions, (1) "Given the nature of this survey, it is possible that other experts may have generated items not included in the original list. If this is the case, would you be interested in participating in a second round of study to validate these new additional words?" (2) "If so, please provide your email address below". These questions were asked in a separate survey window to ensure participants responses and email address remained anonymous. Finally, participants were presented with a survey termination message thanking them for their participation and instructing them to close the survey window. To view the survey package please see Appendix 1.

While completing this survey, one expert did take the opportunity to suggest a word which was not in our original list of words for evaluation. The word *accountability* was therefore added to the list of words for evaluation by the general population participants and was sent to all experts who had responded "yes" to the question "Would you be interested in participating in a second round of study to validate these new additional words?" (n = 3). This concluded data collection for the expert population and initiated the second phase of data collection with the general population.

General Population

Following Ethics approval from the University of Lethbridge Human Participant Research Committee (approval #2021-050), participants were presented with a brief overview of the study, an invitation to participate, and a confidential study link or QR code. When participants clicked/entered the link or scanned the QR code on their device, they were presented with a letter of informed consent detailing the purpose of the study as well as describing the nature of their participation. The survey used for the general population was adapted from the survey described in the previous section. Changes included the addition of a demographics section prior to the word categorization activity and inclusion of three questionnaires (BREQ, GCEQ, and Godin Leisure Time Questionnaire) following the word categorization activity. Demographics information included age, height and weight, gender identity, ethnicity, and highest level of education completed.

As described in the expert participant section, the survey contained the goal definitions created for the previous study (intrinsic, extrinsic). Participants were asked to use these definitions to evaluate each word, selecting an option from a drop-down menu. The drop-down menu options for this study were the same as the previous study, *Intrinsic, Extrinsic, Could be either Intrinsic or Extrinsic, Neither Intrinsic nor Extrinsic* . Unlike the previous survey version, the survey presented to the general population asked participants to classify 118 words (117 words from the original study and 1 additional word generated by the experts). The word *accountability* was added following data collection from the expert population. For each participant, the order of the words within each block was randomized, as was the order the blocks appeared in. Taken together, these three layers of randomization led to a unique word

order for each participant. To view the manner in which each block was presented to participants please see Figure 2.

Following each block of 13 words (and one block of 14), participants were given the opportunity to include any feedback they had regarding the words in the block, including but not limited to, word length and level of reading difficulty. This process was repeated until participants had completed all nine blocks. As above, the order of the words within each block was randomized, as was the order the blocks appeared in. Once all words had been evaluated, the participants were asked to complete three additional questionnaires, the BREQ, GCEQ, and the Godin Leisure Time Exercise Questionnaire. Finally, participants were presented with a survey termination message thanking them for their participation and instructing them to close the survey window. To view the survey package please see Appendix 2. This completed all data collection.

Data Analysis

General Population Comparison

A Chi-Square Test of Homogeneity (R x 2) was conducted using IBM SPSS Statistics for Windows, Version 27.0 for each word (a total of 118 tests) to determine if there were any significant differences in the general population's categorization of words across the four responses. For each significant chi-square (those tests that show there was a significant difference between any of the 4 response options; $p \leq .05$) a follow up pairwise comparison using the Chi-Square Test of Homogeneity, was conducted. These comparisons were *(a) Intrinsic-Extrinsic, (b) Intrinsic-Could be either Intrinsic or Extrinsic, (c) Intrinsic-Neither Intrinsic nor Extrinsic (d) Extrinsic-Could be either Intrinsic or Extrinsic, (e) Extrinsic-Neither Intrinsic nor Extrinsic (f) Could be either Intrinsic or Extrinsic-Neither Intrinsic nor Extrinsic.* In

contrast to the work of McLachlan and Hagger (2011), a Chi-Square Test of Homogeneity was chosen over the cluster analysis for two main reasons, the first reason being that the publication described above did not provide the level of detail needed to replicate the specific clustering analysis used. While clustering analysis can be helpful tool for determining groups within data there are many methods and procedures of clustering to choose from with no clear guidelines to assist researchers with the selection process (Clatworthy et al., 2005). The second reason was that the dependent variable collected within this study (word classification) was neither ambiguous nor continuous as is seen in many cluster analyses (Borgen & Barnett 1987). Additionally, the order in which the words were classified was controlled for through randomization and therefore not a variable of concern. The variable of word classification was classified as a nominal variable with four distinct response options and selecting more than one response option for each word was not allowed.

Expert and General Population Comparison

A Fisher's exact test (R x 2) was conducted for each word (a total of 118 tests) to determine how the word was rated by the expert participants in comparison to the general population participants. The Fisher's exact test was selected over the Chi-Square Test of Homogeneity (R x 2) because the sample size of the expert group (n = 13) violated the assumption of an expected count greater than or equal to five in all cells of the 2xc table (Tabachnick & Fidell, 2013). As above, for each significant Fisher's exact test (those tests that show there is a significant difference between the expert's classification of the word and the general population's classification of the word; $p \leq .05$), six follow up pairwise comparisons (Fisher's exact 2 x 2) were completed. These comparisons compared (a) *Intrinsic-Extrinsic,* (b) *Intrinsic-Could be either Intrinsic or Extrinsic,* (c) *Intrinsic-Neither Intrinsic nor Extrinsic* (d)

Extrinsic-Could be either Intrinsic or Extrinsic, (e) *Extrinsic-Neither Intrinsic nor Extrinsic* (f) *Could be either Intrinsic or Extrinsic-Neither Intrinsic nor Extrinsic*. A Bonferroni adjustment was applied to consider multiple comparisons and avoid the increased risk of a Type One error (MacDonald & Gardner, 2000; Sinclair et al., 2013). A new alpha (α) level was calculated using the equation: adjusted alpha level = original alpha level ÷ number of comparisons (MacDonald & Gardner, 2000; Sinclair et al., 2013), thus making the significance level for all pairwise comparisons $\alpha = .008$.

Gender Comparison

The analysis conducted to compare the perceptions of exercise goal words of men and women was completed using the same data analysis procedure as the prior two analyses. Other gender options including *"non-binary", "transgender" and "prefer not to answer"* were excluded from this analysis due to their small sample size ($n = 4$). A Chi-Square Test of Homogeneity (R x 2) was conducted for each word using the same four response options listed above. For each significant chi-square ($p \leq .05$) a series of six follow up pairwise comparisons, again using the Chi-Square Test of Homogeneity, was conducted. As described above, a Bonferroni adjustment was applied using the same calculation listed above ($\alpha = .008$).

Goal Orientation Comparison

Data collected from the GCEQ (Sebire et al., 2008) was used to group participants by goal orientation into two categories (intrinsic and extrinsic). Consistent with previous research (Pope et al., 2021; Sebire et al., 2008), a composite score was calculated for each of the five subscales (health management, skill development, social affiliation, social recognition, and image) by averaging the scores from each question within the subscale. Missing values were identified and replaced by averaging the scores within each subscale. The composite scores for

the three intrinsic subscales (health management, skill development, social affiliation) and two extrinsic subscales (social recognition and image) were then averaged. A final composite score was calculated using the equation (composite mean score for intrinsic goals – composite mean score for extrinsic goals), with participants scoring above zero classified as intrinsic and below zero as extrinsic (Pope et al., 2021). Three participants who scored exactly zero were removed prior to further analysis.

Following the division of participants into intrinsic and extrinsic groups, analysis proceeded in the same manner as the gender comparisons. A Chi-Square Test of Homogeneity (R x 2) was conducted for each word. For each significant chi-square ($p \leq .05$), a series of six follow up pairwise comparisons, using the Chi-Square Test of Homogeneity, were conducted. A Bonferroni adjusted alpha value was used ($\alpha = .008$).

Results

General Population

The overarching research question in the present study was to explore which exercise goal words adults perceived to be a) intrinsic and/or b) extrinsic. To test this, data from 308 general population participants was used to complete 118 Chi-Square Tests of Homogeneity (one for each word; Table 2). All tests were significant ($p < 0.001$) indicating that for each word, there was a significant difference in the proportion of participants who selected each response option. This demonstrates that at least one response option was preferred by participants at a statistically higher proportion than the others. To determine which goals words the participants perceived as intrinsic and which they perceived as extrinsic, follow up pair-wise comparisons were needed.

In order to determine which response option(s) were preferred by participants, six Chi-Square Tests of Homogeneity were performed as a post-hoc pairwise comparison ($p < 0.05$). Of the 118 words analyzed, 19.49% of goal words reported all six pairwise comparisons were significant, 58.47% demonstrated five significant pairwise comparisons, 13.56% had four significant comparisons, 7.63% reported three significant comparisons, and only one word (*first*), or 0.85%, reported two significant pairwise comparisons. There were no words with only one significant pairwise comparison.

Words that were perceived as significantly more intrinsic than any other category included *self-acceptance, fitness, self-esteem, mastery, satisfaction, exciting, interests, self-worth, want, strength, stamina, curiosity, identity, take control, self-sufficient, empowered, beliefs, physical fitness, purpose, functionality, psychological health, enjoy, cardio, health, internal, skills, passion, challenge, independence, mobility, flexible, value, personal best, goals, physical health, dedication, mental health, technique, knowledge, pleasure, personal value,*

improved form, energy, personality, growth, and accountability. Interestingly, *boredom, guilt, shame, fear, worry,* and *ashamed*.

Words that were perceived as significantly more extrinsic included *peer pressure, influence, appraisal, doctor's orders, popularity, status, image, win, reward, social recognition, attractive, impress others, compare, physical attractiveness, money, impression, approval, recognition, influencer, awards, external, perks, appearance, compete,* and *pressure.* Contrary to what was anticipated, the words *social interaction, friends, community,* and *role model* were all perceived by participants in this study to be significantly more extrinsic than any other option. A full table of results can be found in Table 4.

Additionally, two noteworthy trends appeared in the analysis of this data. First, of the words that had four or five significant pairwise comparisons (72.03%), the vast majority had *Intrinsic-Could be either Intrinsic or Extrinsic* and/or *Extrinsic-Could be either Intrinsic or Extrinsic* as the non-significant comparison. Secondly, 22 of the words (18.64%) on which a post-hoc analysis was conducted demonstrated that the pairwise comparison of *Intrinsic-Extrinsic* was not significant, indicating that the proportion of the general population who categorized the word as intrinsic did not differ significantly from the proportion of those who categorized the word as extrinsic. These words were *weight, perform, fit, execution, attention, lose weight, physique, connection, encouraged, better, obligation, lean, coordination, belonging, muscle, first, build muscle, muscular, toned, idealized, gain weight,* and *relationships.* These results will be elaborated on further in the discussion.

Expert and General Population Comparison

A secondary interest within the first study purpose was to explore if there was a difference in the perceptions of goal words between SDT researchers and the general population. To address this question, data from 325 participants (n_{expert} = 13, $n_{general}$ = 312) were used to complete 118 Fisher's exact tests (2 x c), one for each word. Results demonstrated that SDT experts and the general population differed significantly in how they classified 65 (approximately 55%) of the 118 words tested. ($p < .05$). These words included *boredom, perform, guilt, ashamed, should,* and *fear* among many others. Six follow up pairwise comparisons (Fishers exact 2 x 2) were completed for all significant Fisher's exact tests (65 words). Due to the small sample size of the expert participant group Fishers Exact tests were chosen over Chi-Square Test of Homogeneity for follow up tests.

Of the 65 words in which follow-up pairwise comparisons were conducted, 37 produced at least one statistically significant pairwise comparison (p =.008), with several words including *worry (Intrinsic-Extrinsic* $p < .001$*, Intrinsic-Could be either Intrinsic or Extrinsic* $p = .003$*, Either Intrinsic-Neither Intrinsic nor Extrinsic* $p = .006$*), personality (Intrinsic-Neither Intrinsic nor Extrinsic* $p < .001$*, Extrinsic-Neither Intrinsic nor Extrinsic* $p < .001$*, Could be either Intrinsic or Extrinsic-Neither Intrinsic nor Extrinsic* $p < .001$) and *shame* (*Intrinsic-Extrinsic* $p < .001$, *Extrinsic-Could be either Intrinsic or Extrinsic* $p < .001$) reporting multiple significant comparisons. Interestingly, words such as *want, strength, take control, functionality,* and *lean* among others demonstrated no significant pairwise comparisons using multiple Fisher's exact tests (2 x 2) with a Bonferroni correction ($p < .008$) despite showing statically significant

differences in proportions ($p < .05$) as assessed by Fisher's exact test (2 x c). The full results for all pairwise comparisons can be found in Table 5.[2]

Key results to highlight in this section in relation to research question one was a difference in the perceptions of goal words between SDT researchers and the general population. Specifically, those words which contained a significant follow-up pairwise comparison between the intrinsic and extrinsic response options. There were 13 words that fit this description and when analyzed four different trends emerged. The first is a category of words that the general population perceived as significantly more intrinsic than the expert population while the expert population perceived them as more extrinsic than the general population. Words in this category are *guilt, ashamed, should, fear, shame,* and *worry*. The second category of words (*thin, physique,* and *obligation*) were perceived in the same manner as those in the first category (general population perceived as intrinsic, expert participants perceived as extrinsic) with one key difference. While there was consensus among the expert participants who viewed these words extrinsically, the general population were more evenly divided across the response options.

The third and fourth categories of words are those that were perceived as intrinsic by a significantly higher proportion of experts compared to the general population but as extrinsic by a significantly higher proportion of the general population compared to the experts. These words were *social interaction, connection, belonging* and *community*. As with the second category of words (*thin, physique, obligation*), *connection* was perceived as extrinsic by a significantly higher proportion of the general population (31.9%) compared to experts (7.7%). However, this

[2] Where a Chi-Square statistic and exact significance are not available, the analysis could not be completed because the expert group comparison was a constant, therefor violating the 2 x 2 group comparisons needed for analysis.

finding should be viewed with caution, as in line with the experts, the word *connection* was most often perceived as intrinsic by the general population by a very slim margin (33.9% intrinsic/ 31.9% extrinsic).

Goal Orientation Comparison

The second research question (2) addressed in the current study explored whether adults perceive exercise goal words to be intrinsic or extrinsic based on their goal orientation (2a) and gender (2b). Turning first to the sub-question related to goal orientation (2a). Participant goal orientations were classified as either intrinsic or extrinsic by computing the mean intrinsic and extrinsic subscale scores from the GCEQ (Sebire et al., 2008). Due to missing or incomplete date greater than 5%, 71 cases were removed from further analysis leaving 245 cases (Tabachnick & Fidell, 2013). Suspected reasoning for this amount of missing data is explored further in the limitations section. Two univariate (Z score greater than ± 3.0) and one multivariate (Mahalanobis distance greater than 10) outliers were also removed prior to further analysis (Tabachnick & Fidell, 2013). Nine missing values (3.72%) were replaced using the mean value specific to the subscale of the missing value. Data from 242 general population ($n_{\text{intrinsic}} = 150$, $n_{\text{extrinsic}} = 92$) participants were used to complete 118 Chi-Square Tests of Homogeneity (one for each word) to compare the perceptions of goal words from those with intrinsic goal orientations to those with extrinsic goal orientations across the four response options. Of the 118 tests run, only eight tests indicated a significant difference between two or more response options ($p < .05$). These words were *fitness, mastery, health, value, mental health, improvements, personal value, role model*, and *have to.*

Six post-hoc chi-square tests were conducted for each significant result. As was seen in the expert - general population comparison, as well as the gender comparison, only four words

remained significant at follow up despite the original chi-square tests being significant. These words were *fitness* (*Intrinsic-Neither Intrinsic nor Extrinsic* $\chi^2 = 10.79$; $p = .001$* and *Could be either Intrinsic or Extrinsic-Neither Intrinsic nor Extrinsic* $\chi^2 = 7.75$; $p = .005$*), *improvements* (*Intrinsic-Extrinsic* $\chi^2 = 9.22$; $p = .002$*), *personal value* (*Extrinsic-Neither Intrinsic nor Extrinsic* $\chi^2 = 7.55$; $p = .006$*) and *have to* (*Intrinsic-Extrinsic* $\chi^2 = 7.50$; $p = .006$*). The remaining words *mastery, health, value, mental health*, and *role model* did not report any significant post-hoc comparisons.

Elaborating further on the above results, *fitness* was the only word which demonstrated more than one significant post-hoc follow up. Those with an intrinsic goal orientation perceived *fitness* as an intrinsic goal at a significantly higher proportion than those with an extrinsic goal orientation. Alternatively, those with an extrinsic goal orientation perceived *fitness* as *Neither Intrinsic nor Extrinsic* at a significantly higher proportion than those with an intrinsic goal orientation. When looking at the word *personal value* a similar but opposite trend can be seen. Participants with an extrinsic goal orientation perceived the word *personal value* as extrinsic at a significantly higher percentage than participants with an intrinsic goal orientation whose perceptions were more clearly in agreement with the theoretical understanding of *personal value* as an intrinsic goal word.

The words *improvement* and *have to* both followed an interesting trend with key practical implication that will be further elaborated on in the discussion section. Both words were perceived as intrinsic by a significantly higher proportion in those with an intrinsic goal orientation compared to an extrinsic orientation, while the opposite was also true, both words were perceived as extrinsic by a significantly higher proportion of participants with an extrinsic goal orientation. A full table of results can be found in Table 6.

Gender Comparison

In addition to goal orientation, the current study aimed to explore whether adults of varied gender differ in their perception of exercise goals words. To test this, data from 308 general population participants were used to complete 118 Chi-Square Tests of Homogeneity (one for each word) to compare men and women across the four response options *Intrinsic, Extrinsic, Could be either Intrinsic or Extrinsic, Neither Intrinsic nor Extrinsic.* A significant difference was reported for 25 words ($p < .05$). These significant differences indicated that for 25 of the words presented, there is significant difference in how adults perceive exercise goals words based on their gender.

To determine which response options varied between men and women, six post-hoc comparisons were performed using the Chi-Square Test of Homogeneity with a Bonferroni correction to adjust for multiple comparisons ($p < .008$). Of the significant chi-square tests,32% (8) resulted in no significant post-hoc comparison. These words were *social interaction, fit, flexible, beneficial, awards, dedication, compete*, and *worry*. The words in which a significant post-hoc comparison was present were as follows; *self-acceptance* ($p < .001$), *self-worth* ($p < .001$), *attention* ($p = .002$), *beliefs* ($p = .002$), *connection* ($p = .006$), *money* ($p = .009$), *passion* ($p = .006$), *goals* ($p = .005$), *mental health* ($p < .001$), *shame* ($p = .007$), *knowledge* ($p = .003$), *pleasure* ($p = .001$), *personal value* ($p = .004$), *appealing* ($p = .005$), *personality* ($p = .007$), *pressured* ($p = .003$), and *obligation* ($p = .008$; $p = .007$).

Key findings to note from these results include the words *self-worth, mental health, passion, knowledge, pleasure, personal value,* and *personality,* which were all perceived as significantly more intrinsic compared to the other three response options for women in comparison to men. A major exception to this trend is the word *shame*, the most popular

response option by men was *Could be either Intrinsic or Extrinsic* (31.7%). This was also demonstrated by an even split between men who perceived the word as intrinsic (26.0%) and men who perceived the word as extrinsic (26.0%). This was not the case with women, however, with 41.4% of whom perceived the word as intrinsic. By separating the general populations' perceptions of the word shame by gender, one is able to see that the significantly higher proportion of participants who perceived this word as intrinsic was mainly driven by women.

Attention and *money* were both perceived by women as significantly more extrinsic compared to other response options, while connection was perceived by men as significantly more extrinsic compared to other response options. *Obligation* was also a word which requires further elaboration as the proportion of men and women who perceived this word as more intrinsic compared to other response options or more extrinsic compared to response options did not differ significantly ($\chi^2 = 0.00$; $p = .980$). However, the proportion of women who perceived *obligation* as a word which *Could be either Intrinsic or Extrinsic* was significantly higher than that of men, a higher proportion of whom perceived the word as either intrinsic or extrinsic but not both. A full table of results can be found in Table 7.

Discussion

The overarching purpose of the current research was to explore the previously unstudied area of adults' perception of exercise goal words guided by the SDT. To fully grasp the practical and theoretical implication of the findings discussed here, it is critical to re-iterate the interplay as well as the differences between goals and motives within SDT. According to SDT, goals explain what an individual wants to achieve while motivation explains why an individual wishes to pursue that action (Deci & Ryan, 2000). Goals and motives are often closely linked as every goal an individual sets will have an underlying motivation and vice versa. While goals and motives are equally integral to understanding human behaviour, the purpose of the current research was to investigate perceptions of exercise goal words in an attempt to complement behaviour change strategies, specifically pertaining to message framing literature guided by the SDT framework. Understanding how message recipients perceive intrinsic and extrinsic exercise goal words is critical as these perceptions shape how a behaviour is cognitively processed and eventually acted upon (or not acted upon). Numerous studies have linked negative outcomes such as ill-being, depression, anxiety, and burnout with the pursuit of extrinsic goals over time (Kasser & Ryan, 1993; Kasser & Ryan 1996; Pope et al., 2018; Teixeira et al., 2012; Vansteenkiste et al., 2008). The opposite is true of intrinsic goals, which have been linked to positive outcomes such as increased exercise engagement, increased self-worth, basic psychological need fulfilment and psychological well-being (Kasser & Ryan, 1993; Kasser & Ryan 1996; Pope et al., 2018; Sebire et al., 2009; Teixeira et al., 2012). The above references highlight the importance of understanding and fostering intrinsic versus extrinsic goals, particularly within health behaviour change information.

Fostering intrinsic versus extrinsic goals within health behaviour change messages is one modality through which positive outcomes such as increased self-efficacy and psychological well-being can be achieved. With that said, in order for messages to have the intended positive effect ensuring that messages are perceived as the message creator intended (intrinsically) is of vital importance. If the message recipient's perceptions of the goals emphasized in a message differ from how the message creators intended them to be perceived, the message may not provide the beneficial outcomes associated with intrinsic goals to the reader.

The current research addressed two main research questions. The first (1) examined if there was a difference between adults' perceptions of exercise goal words as intrinsic and/or extrinsic. Within this main research question the sub question (1a) of if differences existed between SDT researchers' perceptions of exercise goal words and those of the general population was also explored. The second main research question (2) explored in this study was whether the personal characteristics of gender and goal orientation played a role in how adults perceive exercise goal words in relation to intrinsic and extrinsic goals. The theoretical and practical implications of these findings for message developers and researchers which will be discussed below.

General and Expert Populations Comparison

To address the first main research question (1) of the current study, perceptions of exercise goal words from the general population were compared within the general population itself and to the SDT expert population. Within the general population, 46 words were perceived as more intrinsic than any other category including *self-esteem, mastery,* and *satisfaction,* while 29 words were perceived as significantly more extrinsic including *appearance, compete*, and *pressure.* This left 43 words that were either most often perceived as one of the other two

response option (*Could be either Intrinsic or Extrinsic, Neither Intrinsic nor Extrinsic*) or perceptions were more evenly split between the four response options (no significant differences). When comparing the perceptions of the SDT expert group with those of the general population, 65 of the words tested (55%) differed significantly between the two groups in how they were perceived.

Many of the words that were perceived as intrinsic by general population participants were in line with the theoretical definition of intrinsic goals in that they were inwardly focused, freely engaged out of interest, and satisfied the basic psychological needs of autonomy, competence, and/or relatedness (Deci & Ryan, 2000; Sebire et al., 2008). This point is further supported by a lack of significant difference for these words between the general populations perceptions of these words compared to the expert participants perceptions. The same was true for goal words that were perceived as extrinsic such as *popularity, status*, and *reward,* among others, which align with the definition of extrinsic goals of being outwardly focused, externally referenced, and thwart one or more of the basic psychological needs of autonomy, competence, or relatedness (Sebire et al., 2008; Williams et al., 2000). Again, these words demonstrated no significant difference when comparing the perceptions of the general population to those of SDT experts.

Theoretical implications of these findings include the advancement of previous goal frame research within the field of SDT. The above findings identify a set of exercise goal words that the general population perceive to align with that of SDT experts and with the theoretical definitions of intrinsic and extrinsic goals within SDT (Deci & Ryan 2017). Additionally, while it has previously been demonstrated that participants can implicitly differentiate between intrinsic and extrinsic goals (McLachlan & Hagger, 2011), the current research suggested that

general population adults may also explicitly differentiate between some goals, but not all, in a similar manner to SDT experts. This is important as it provides SDT researchers focused on goal framing with a list of words which they can be reasonably assured will be perceived as either intrinsic or extrinsic by research participants. This finding may also contribute to future research undertaken with the purpose of eliminating the need for manipulation checks (tests which ensure a messaging prompt is being perceived as intended) which are currently commonplace in this type of research (Pope et al., 2021; Pope & Pelletier, 2021).

These findings also offer practical implications for messaging researchers in that these words can be used in research comparing intrinsic and extrinsic goals with some confidence that they will be perceived by study participants as intended, thus avoiding potential confounding factors in their analyses. Turning to applied implications for message designer or policy developers, itrinsic words from this category could be used in behaviour change messages or PA promotion information to illicit the positive outcomes linked to intrinsic goals while avoiding possible negative outcomes due to differences in goal perception of the reader.

Transitioning from the anticipated results to the unanticipated results. Within the words tested, there were several words that were perceived by the general population participants in a manner that did not align with the SDT-based definitions and varied significantly from perception of the expert participants. Firstly, the words *boredom, guilt, shame, fear, worry*, and *ashamed* were all perceived by the general population participants as more intrinsic than any of the other three response options. This is interesting given that these words do not support the basic psychological needs which corresponds with the definition of extrinsic goals (Kasser & Ryan, 1993, 1996). These words were also perceived as more extrinsic than any other response option by the expert participants and when the two participants groups were compared, a

significant difference existed between the two groups. This finding further exemplifies the division between the general population's perceptions and the experts' theoretical perceptions of extrinsic goals. Reflecting on these words collectively, one could surmise that they all fall into a similar category of internally focused emotions one may feel in relation to exercise. In a 2011 meta-analysis, Kim and colleagues describe shame and guilt, along with pride and embarrassment as "self-conscious' emotions, defined by a self-evaluative process in relation to important standards of behaviour. While the cause of guilt or shame may be outwardly focused (e.g., feeling guilty for skipping a workout session with a gym buddy), these emotions are internally focused (Kim et al., 2011; Tracy et al., 2007), and this research has demonstrated that the general population may be interpreting them as such.

In contrast to those words perceived as more intrinsic, words perceived as significantly more extrinsic than any other response option by the general population included, *social interaction, friends*, and *community*. In contrast, the expert participants perceived these words to be more intrinsic than any other option. As with the intrinsic examples described above, these words appear to have been perceived differently according to the theoretical definition of extrinsic goals (Ryan & Deci, 2002) and the perceptions of SDT experts. One possible explanation for this finding is that according to SDT, the definition of an extrinsic goal is multi-faceted. For example, the inclusion of goals being externally referenced while also including a focus on tangible rewards. While these goal words have the potential to foster the basic psychology need of relatedness and through this are generally perceived as increasing an individual's enjoyment of an activity, it can also be argued that these goals are outwardly focused and therefore may be perceived as extrinsic. For example, the social affiliation subscale of the GCEQ includes exercise goals such as "I exercise to develop close friendships and I

exercise to meet others who share my exercise interests", and the scale creators classify the subscale as an intrinsic (Sebire et al., 2008). While these goals would clearly support the basic psychological need of relatedness, they also require an outward focus and the involvement of others outside the individual themselves. It appears that this reference to outwardly focused goals within the definition of extrinsic goals may have become a focus for the general population who lack an in-depth understanding of SDT. This lack of in-depth knowledge and fixation on one aspect of the definition may present a situation in which, as is the case here, these words are perceived as extrinsic by a significant percentage of message recipients from both populations (*social interaction* 52.75%, *friends* 41.42%, *community* 46.93%). Taken together, both categories of words that deviate from the theory derived definitions of intrinsic and extrinsic goals and significantly differ from the perceptions of SDT experts, provide important practical and theoretical considerations.

From a theoretical perspective, these results suggest future researchers may benefit from re-evaluating the goal content for exercise questionnaire, with particular attention being paid to the Social Affiliation subscale. Findings from the original validation of the GCEQ found that social affiliation (intrinsic) and social recognition (extrinsic) were the least endorsed goals of the five subscales and that this finding was consistent between both genders (Sebire et al., 2008). The social affiliation subscale contains prompts such as connecting with others in a meaningful manner and developing close friendships. The findings of the current study suggest that the general population may not be perceiving these social affiliation goals as intrinsic, a finding which to the best of our knowledge has not been reported previously. Although these results are preliminary, they also provide contradictory evidence, for some words but not all, to the findings of McLachlan and Hagger (2011), which reported that participants could not explicitly classify

exercise goals as intrinsic or extrinsic as determined by SDT experts. A potential reason for the differences between the findings of the current study and those of McLachlan and Hagger (2011), is the different methodologies used, particularly the use of motivation (not goal) definitions which were provided to the participants.

Practically, messaging researchers must ensure that prior to drawing any comparisons between intrinsic and extrinsic goal outcomes or message effectiveness, they must first ensure that participants are perceiving the goals as they intended to be perceived. This can be done through the use of manipulation checks, as advocated by Pope et al. (2021) and Pope and Pelletier (2021), or through the use of previously evaluated words such as those described in the beginning of this section. That said, these findings do still need to be interpreted with caution as some participants did vary in their interpretations, and findings were not consistent across all words.

Leaving the comparisons to expert participants and theory behind momentarily, there were two additional trends of note apparent in the general population analysis. The first trend being that the vast majority of non-significant pairwise compassions across all words were between the response option *Intrinsic-Could be either Intrinsic or Extrinsic* and/or *Extrinsic-Could be either Intrinsic or Extrinsic.* This result indicates that within the study population, there was a large proportion of participants who expressed ambiguity in the categorization of 43 words (approximately 36% of words tested). While a large proportion of the general population perceived these words to be either intrinsic or extrinsic, there was a second proportion of participants who indicated they perceived the word could be intrinsic or extrinsic. This is potentially problematic for messaging researchers who require goal framing to be clearly perceived as intrinsic or extrinsic by participants in order to evaluate messaging outcomes or

behaviour change effectiveness. Words that were perceived with high levels of ambiguity included *weight, perform, fit, execution, attention, lose weight, physique, connection, encouraged, better, obligation, lean, coordination*, and *belonging,* among others (for all words see Table 5). It should be noted that although the current study only asked participants to indicate their perception of each word in relation to exercise goals, the list of words was created to represent both motives and goals which may provide a partial explanation for some of the ambiguity in relation to goals.

The second trend which emerged in this analysis was words which had no significant difference in the proportion of general population participants who perceived the word to be intrinsic compared to those who perceived it as extrinsic. These words included *weight, perform, fit, execution*, and *attention* among others. Above all other findings discussed in this section, this finding may be the most important consideration for researchers with a focus on comparing the effects of framed messages or goal framing to promote message effectiveness. These results demonstrate that some exercise goal words may be perceived quite differently by different message recipients, thus serving as a major confounding factor for this type of research and should be approached with extreme caution. Words in this category also highlight the problematic (for goal researchers) interplay between goals and motives. Practically, message designers should approach these goal words with the same discretion, as they represent some of the most commonly used goal words in exercise. Staying vigilant for these goal words avoids the potential negative outcomes often associated with endorsing extrinsic goals as described above (Pope et al., 2018).

Goal Orientation Comparison

The second main research question (2) addressed in this study explored whether the personal characteristics of goal orientation (2a) and gender (2b) played a role in how adults perceive exercise goal words in relation to intrinsic and extrinsic goal orientations. As discussed in the introduction, goals represent what and individual wants to achieve, in contrast to motivation which represents why an individual's wants to achieve a goal (Deci & Ryan 2000). The goal orientation of message recipients, the mindset with which an individual approaches a goal, has recently received more empirical attention as the Regulatory Fit Theory has been used as a message tailoring strategy within behaviour change messages (Lee & Pounders, 2019; Pope et al., 2021). The Regulatory Fit Theory developed by Higgins (2000; 2005), considers how one thinks and feels about decisions in relation to the "fit" between an individual's goal orientation and the information they are receiving.

In contrast to some findings of exploring the application of the Regulatory Fit Theory within research (Pope et al., 2021), and in agreement with others (Lee & Pounders, 2019), the current study reported a significant difference in perception of goal words between participants with an intrinsic goal orientation and those with an extrinsic goal orientation for only eight of 118 total words analyzed (6.8%). These words were *fitness, mastery, health, value, mental health, improvements, personal value, role model*, and *have to,* with only *fitness, improvements, personal value* and *have to* remaining significant following post hoc comparisons. Analysis from these words was in line with the Regulatory Fit Theory in that they were perceived as more intrinsic by those with an intrinsic goal orientation and more extrinsic by those with an extrinsic goal orientation. The word *have to* was particularly interesting as it was perceived as significantly more intrinsic by those with an intrinsic goal orientation and was perceived as more

extrinsic by those with an extrinsic goal orientation. The word *improvement* followed the same trend as *have to*, supported the Regulatory Fit Theory. Overall, the Regulatory Fit Theory was only supported by a very small number of words and overall, the results did not demonstrate a significant difference in perception based on goal orientation.

Theoretical implications of these findings include that while the goal orientation of the message recipient may have a clear impact on which messages recipients choose to read, how persuasive they find the message (Pope et al., 2021), and even how the message impacts their behaviour (Glowacki, et al., 2020; Spiegel et al., 2004), reader goal orientation may not play a strong role in the perception of goals as intrinsic or extrinsic. As the results of the current study regarding goal orientation were mainly non-significant, future research in the area of message perceptions and the Regulatory Fit Theory may wish to focus on other indices of fit between message and recipient such as motivation orientation.

Gender Comparison

In addressing the second main research question of this study, (2b) perceptions of intrinsic and extrinsic exercise goal words were also analyzed in relation to gender. Compared with the goal orientation results, gender rendered more significant differences in goal word perceptions with 25 words demonstrating significant differences in between men and women. In general, the results from this section demonstrate a trend in which women's perceptions of exercise goal words, more so than men's, align with the theoretical definition of intrinsic goals as described by SDT (Deci & Ryan, 2000; Kasser & Ryan, 1993; Kasser & Ryan, 1996). This can be seen in words such as *attention* and *money* for which women's perceptions of the words more closely matched that of SDT experts (extrinsic) and the theoretically definitions of extrinsic goals (Deci & Ryan, 2000; Kasser & Ryan, 1993; Kasser & Ryan, 1996), while men's

perceptions of these were nearly opposite with a higher percentage of men rating these words as intrinsic.

The limited research that has examined gender differences in message perception in the exercise context has focused on message persuasiveness. In line with the findings of the current study, previous research found that women generally reported intrinsic messages to be more favorable and persuasive than men, while men found extrinsic messages to be more favorable and persuasive than women (Pope & Pelletier, 2021). Additional research in this area has demonstrated that men (particularly younger men) are more susceptible than females to the influence of reward and competition in social settings (Oyibo et al., 2017). The authors of this research suggest this finding could be useful in tailoring persuasive applications such as through gamification (Oyibo et al., 2017). Both current and previous research has demonstrated that gender may play an important role in an individual's perception of goal framed messages.

Additionally, despite the calls from researchers to frame PA and exercise goals intrinsically (Pope et al., 2018), much of the media and messaging surrounding PA and exercise still relies on the attention-grabbing power of what SDT experts classify as extrinsic goal words such as *attention* and *money* (Berry & Latimer-Cheung, 2013). The findings described above indicate that women perceive these theoretically extrinsic types of goals as more extrinsic than men and as such could hypothetically explain some gender differences seen in physical activity.

One major exception to the trend in which women's perceptions of exercise goal words align with the theoretical definition of intrinsic goals is the word *shame*, which as discussed in the general population results, more closely aligns with the theoretical definition of extrinsic goals as described by SDT (Deci & Ryan, 2000; Kasser & Ryan, 1993; Kasser & Ryan, 1996) and was perceived as strongly extrinsic by the SDT expert population. *Shame* was perceived as

equally intrinsic and extrinsic by women, whereas men perceived *shame* as more extrinsic than any other response option. This result is interesting given the findings of Teixeira and colleagues (2012) regarding the effects of gender on the relationship between introjected regulation (motivation behind a behaviour related to feelings of "must' or "should") and physical activity. As previously described, this study reported that introjected regulation was positively associated with exercise behaviour among women (Teixeira et al., 2012). The current study suggests that women, more so than men, interpreted the word *shame* as an intrinsic goal/motive which could partially account for the association of introjected motivation with PA among women. This is a key theoretical implication which should be explored further.

Moving beyond the word *shame*, differences in perception between men and women were less common when viewing extrinsic words (as determined by the theoretical definitions and the perceptions of the SDT experts) compared to intrinsic words. Generally, words such as *popularity* and *peer pressure* that closely align with the theoretical definitions of extrinsic goals within SDT (Deci & Ryan, 2000; Kasser & Ryan, 1993; Kasser & Ryan, 1996) were perceived as more extrinsic than any other response option by both men and women. From a practical point of view, words that did not differ significantly may be of great benefit to messaging researchers in future studies. If these words were used in messages which elicited gender differences in a dependent variable, researchers would have a higher level of confidence that any differences were a result of the type of message rather than how it was perceived by the reader.

The same could not be said for intrinsic words such as *passion* and *self-worth* in that women's perceptions of goal words more closely match those of the SDT experts than that of the men. Theoretical implications of these findings expand upon the somewhat limited research in the area of gender differences within SDT framed behaviour change messaging and provide

preliminary evidence of gender differences of perceptions of exercise goal words. Practical implications of these findings suggest that special care should be taken when creating messages tailored to men or addressing specific men's health behaviour concerns. Particular attention should be given to specific intrinsic words such as *passion* and *self-worth* that were not strongly perceived as intrinsic by men. Where resources are available, the words *self-worth, mental health, passion, knowledge, pleasure, personal value*, and *personality* should be included in messages for women, but not necessarily for men. In contrast, words such as *self-acceptance, self-worth, attention, beliefs, connection, money, passion, goals, mental health, shame, knowledge, pleasure, personal value, appealing, personality, pressured* and *obligation* should be avoided with messages given to diverse population with both men and women.

Limitations and Future Directions

Limitations

The current study relied entirely on participant self-report, which while common practice and essential for studying individual's perceptions, is prone to errors and biases (Kahn et al., 2014). This limitation was mitigated by ensuring participants were aware that there was no "right" answer to the survey questions and that their responses would be kept anonymous and confidential. Because of the time restraints of a master's program and the restrictions imposed by the COVID-19 pandemic most of the data collected for this study were collected virtually and through various social media sites including Facebook. The online nature of this survey also aided in providing some distance between researcher and participant and therefore a decreased risk of desirability biases.

While the online method of data collection may have provided a sense of comfort to participants that their answers would remain anonymous, it also provided an additional limitation in and of itself. After the initial round of data collection, the primary investigator became concerned about the quality of the responses received. This concern was based mainly in survey durations (the time taken to complete the survey), which tended to be unrealistically short. To combat this, a second round of data collection was completed using Amazon's Mechanic Turk platform, which allows qualified participants to complete short tasks for a monitory compensation. Approximately one third of the data presented in this thesis was collected through Mechanic Turk with the other two thirds collected through social media and convenience sampling. An analysis of the similarities and differences between these two modality types was performed using multiple Chi-Square Goodness of Fit Tests. The results of this analysis can be found in Table 8. While some differences were found between the data collection modalities,

these differences may be attributed to other demographic variables differing between the two groups such as age and gender. Gender and goal orientation variables separated by collection modality can be seen in Figure 3. With this information and a relatively large sample size, data from both collection modalities was retained.

Another potentially limiting factor that should be addressed is the impact of cultural differences amongst participants in this study. As described by Lee and Pounder (2019), how an individual defines themselves as independent or interdependent of their community can impact how they interact with intrinsic and extrinsic goals. This may have accounted for some degree of variance in goal word perception within this study between those of different cultural backgrounds. While the study was advertised online in an effort to capture as diverse a population as possible, the majority of participants were Caucasian. This also impacts the generalizability of these findings to cultures where a more interdependent self-view is more common. Future research should explore adults' perceptions of goal words within different cultural groups, particularly those which place emphasis on interdependent community.

Additional limitations include the small sample size of the SDT expert participant group which necessitated the use of Fisher's Exact tests in analyses involving this group, as well as the non-binary and transgender participants who were excluded from the gender analysis due to an insufficient sample size ($n = 4$). Limitations were also present in the completion of the Goal Content for Exercise Questionnaire in that a large section of participants were removed from further analysis due to incomplete or missing data. One could speculate that this large proportion of missing data may have been due to the manner the questions were presenting through the online survey platform as several participants responded to the first 20 items only. This limitation was identified, and the online survey was modified to provide more clear instructions

in the second round of data collection. Finally, the reading level of the intrinsic and extrinsic goal definitions remained high (see Table 1), despite attempts from the primary author to make it as accessible as possible for participants.

Future Direction

The current research provides a solid foundation for future research in adults' perceptions of SDT framed goals and the authors advocate for continued study with the hope that manipulation checks in messaging research become obsolete. Additionally, despite limited significant findings related to message recipient goal orientation (Regulatory Fit Theory ; Higgins, 2000), future research should explore message perception in relation to other variables including motivation orientation. In addition, researchers may wish to expand on previous Regulatory Fit Theory research related to self-construal (Lee & Pounders, 2019) from the perspective of goal perception. Specifically, differences in goal perception between those with independent and interdependent self-construal. This would also address the limitation of potential cultural differences in goal perception described in the above section. Furthermore, one characteristic of message recipients that was not explored in the current study due to time constraints but has been shown to impact message perceptions is age (Oyibo et al., 2017).

On a broader level, the research presented here only analyzed adults' perceptions of framed goals at their most basic level, words. While these findings provide a starting point for research in this area, additional research focused on adults' perceptions of sentences and longer messages is needed in order for message designers and those at the policy level to implement these findings. Building upon the findings of the current study, researchers should explore adults' perceptions of more complex phrases and short sentences which could be used as tag lines, highlighted frames, or text messages in behaviour change messages. By expanding upon

the number of words being evaluated at a time, ensuring that messages are perceived as goal focused separate from messages which are motivation focused will provide less of a limitation when compared to the current research.

Conclusion

In summary, the current study demonstrated many significant differences in the perceptions of exercise goal words by the general population when compared to perceptions of some words by SDT experts. This study also highlighted key differences in perception based on gender that may serve as a basis for future research in the area of goals, specifically social goals, in relation to PA and exercise. That said, the present study also identified many words that were perceived in a similar manner between experts and the general population which may provide a useful starting point for future work in this area.

Given the numerous benefits of promoting intrinsic goals related to exercise, physical activity, and behaviour change generally, ensuring that message recipients are perceiving messages in the way they are designed to be perceived should be a priority for message designers and researchers. If messages are not perceived as intended by the message recipient, years of previous research demonstrating the outcomes, both positive and negative, of intrinsic and extrinsically framed goals will be of minimal use due to this problematic kink in how information, cognitions, and behaviour interact. This is particularly concerning in messages aimed at influencing the cognitions and behaviours of men as the current research has shown that their perceptions of framed goals often deviate from those of women and SDT experts regardless of gender.

The findings of the current study generally highlight the need for further study in area of goal perceptions and maintained, if not increased, caution from messaging researchers. The

practice of manipulation checks and careful word selection when creating messaging prompts for research studies should be maintained until further research can be completed. From public health campaigns to digital and print advertisements, to occupational health and safety practices, behaviour change messaging research crosses disciplinary boundaries. Understanding how perceptions and goal framing interact has important implications in exercise psychology and beyond.

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Table 1

Original and Final Goal Definitions (Intrinsic and Extrinsic)

Original	Final	Reading Level	
Intrinsic goals focus on achieving something personally meaningful that relates to your passions, interests, core values, personal growth or development, or important relationships.	Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.	Flesch Reading Ease Flesch-Kincaid Grade Level	24.0 19.5
Extrinsic goals focus on achieving something outside yourself such as a certain image, validation or approval from others, comparison or outperforming others, as well as tangible rewards (e.g., money or items such as clothing).	Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, or social status, or on tangible rewards from other people or organizations such as money or swag items.	Flesch Reading Ease Flesch-Kincaid Grade Level	18.0 19.1

Table 2

Finalized List of Words for Categorization

Block A	Block B	Block C
Self-Acceptance	Perform	Attention
Peer Pressure	Fit	Strength
Fitness	Interests	Thin
Social Interaction	Self-worth	Should
Boredom	Appraisal	Reward
Influence	Doctor's Orders	Stamina
Self-Esteem	Popularity	Social Recognition
Mastery	Status	Curiosity
Satisfaction	Want	Fear
Weight	Guilt	Identity
Exciting	Image	Take control
Win	Execution	Self-sufficient
Best	Ashamed	Lose weight
Block D	**Block E**	**Block F**
Attractive	Impress Others	Lean
Physique	Better	Passion
Empowered	Enjoy	Challenge
Beliefs	Compare	Independence
Physical Fitness	Cardio	Approval
Failure	Physical Attractiveness	Mobility
Purpose	Money	Friends
Important	Impression	Flexible
Functionality	Health	Beneficial
Connection	Internal	Coordination
Fame	Skills	Value
Psychological health	Obligation	Personal Best
Encouraged	Ideal	Belonging
Block G	**Block H**	**Block I**
Muscle	Knowledge	Appearance
Goals	Pleasure	Have to
First	Build Muscle	Strong
Recognition	Muscular	Idealized
Influencer	Fun	Appealing
Physical health	Improvements	Gain weight
Awards	Personal Value	Energy
Unpleasant	Role Model	Compete
Community	External	Personality
Dedication	Toned	Relationships
Mental health	Financial Success	Growth
Shame	Improve Form	Worry

Technique	Perks	Pressured

Table 3

Words Categorized According to Self-Determination Theory

Intrinsic		**Extrinsic**	**Either Or**
Beliefs	Pleasure	Appearance	Appealing
Belonging	Psychological health	Approval	Best
Cardio	Purpose	Ashamed	Better
Challenge	Relationships	Attention	Build Muscle
Community	Self-Acceptance	Attractive	Fit
Connection	Self-Esteem	Awards	Gain weight
Coordination	Self-sufficient	Compare	Goals
Dedication	Self-worth	Compete	Ideal
Empowered	Skills	Doctor's Orders	Impression
Encouraged	Social Interaction	Execution	Muscle
Energy	Stamina	External	Muscular
Enjoy	Strength	Failure	Perform
Exciting	Technique	Fame	Personality
Fitness	Value	Fear	Role Model
Flexible		Financial Success	Strong
Friends		First	Thin
Fun		Image	Toned
Functionality		Impress Others	Weight
Growth		Influence	
Health		Influencer	**Neither**
Idealized		Lean	Appraisal
Improve Form		Lose weight	Beneficial
Improvements		Money	Boredom
Independence		Obligation	Curiosity
Interests		Peer Pressure	Guilt
Internal		Perks	Have to
Knowledge		Physical Attractiveness	Identity
Mastery		Physique	Important
Mental health		Popularity	Pressured
Mobility		Recognition	Satisfaction
Passion		Reward	Shame
Personal Best		Social Recognition	Should
Personal Value		Status	Unpleasant
Physical Fitness		Take control	Want
Physical health		Win	Worry

Table 4

General Population Participants Categorization of Exercise Goal Words

Word	Intrinsic	Extrinsic	Either Or	Neither Nor	Chi-Square	Exact Sig. (2-sided)
Self-Acceptance	64.72% (200)	13.91% (43)	16.18% (50)	4.85% (15)	374.92	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 174.37$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 158.13$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 252.03$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.62$; $p = 0.43$				
Extrinsic-Neither		$\chi^2 = 14.90$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 21.03$; $p < 0.001$*				
Peer Pressure	20.71% (64)	52.43 % (162)	18.77% (58)	7.77% (24)	191.99	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 71.06$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.39$; $p = .532$				
Intrinsic-Neither		$\chi^2 = 21.31$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 81.09$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 152.37$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 16.22$; $p < 0.001$*				
Fitness	43.04% (133)	21.36% (66)	29.45% (91)	5.83% (18)	122.44	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 34.32$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 11.25$; $p = 0.001$*				
Intrinsic-Neither		$\chi^2 = 117.47$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 6.58$; $p = 0.001$*				
Extrinsic-Neither		$\chi^2 = 31.68$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 62.81$; $p < 0.001$*				
Social Interaction	19.74% (61)	52.75% (163)	21.68% (67)	5.50% (17)	195.36	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 71.60$; $p < 0.001$*				

Intrinsic-Could be Either		χ^2 =0.45; p = .050*				
Intrinsic-Neither		χ^2 =29.51; p < 0.001*				
Extrinsic-Could be Either		χ^2 =61.70; p < 0.001*				
Extrinsic-Neither		χ^2 =61.70; p < 0.001*				
Could be Either-Neither		χ^2 =36.45; p < 0.001*				
Boredom	47.90% (148)	18.45% (57)	20.06% (62)	13.27% (41)	122.69	p < 0.001*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		χ^2 =61.43; p < 0.001*				
Intrinsic-Could be Either		χ^2 =55.71; p < 0.001*				
Intrinsic-Neither		χ^2 =88.19; p < 0.001*				
Extrinsic-Could be Either		χ^2 =0.17; p = .685				
Extrinsic-Neither		χ^2 =3.05; p =.081				
Could be Either-Neither		χ^2 =4.61; p =.032*				
Influence	20.71% (64)	51.13% (158)	23.30% (72)	4.53% (14)	194.18	p < 0.001*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		χ^2 =66.08; p < 0.001*				
Intrinsic-Could be Either		χ^2 =0.57; p =.451				
Intrinsic-Neither		χ^2 =36.81; p < 0.001*				
Extrinsic-Could be Either		χ^2 =55.28; p < 0.001*				
Extrinsic-Neither		χ^2 =173.13; p < 0.001*				
Could be Either-Neither		χ^2 =45.35; p < 0.001*				
Self-Esteem	62.14% (192)	13.59% (42)	20.39% (63)	3.56% (11)	341.98	p < 0.001*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		χ^2 = 161.73; p < 0.001*				
Intrinsic-Could be Either		χ^2 = 117.37; p < 0.001*				
Intrinsic-Neither		χ^2 = 248.10; p < 0.001*				
Extrinsic-Could be Either		χ^2 = 5.05; p = .025*				
Extrinsic-Neither		χ^2 = 19.81; p < 0.001*				
Could be Either-Neither		χ^2 = 41.44; p < 0.001*				
Mastery	43.69% (135)	18.12% (56)	28.80% (89)	9.06% (28)	111.17,	p < 0.001*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		χ^2 = 47.15; p < 0.001*				
Intrinsic-Could be Either		χ^2 = 14.24; p < 0.001*				

Intrinsic-Neither		$\chi^2 = 96.89$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 10.23$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 11.45$; $p = 0.001$*				
Could be Either-Neither		$\chi^2 = 41.18$; $p < 0.001$*				
Satisfaction	51.46% (159)	17.15% (53)	27.51% (85)	3.56% (11)	204.81	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 82.06$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 35.04$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 179.39$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 11.21$; $p = 0.001$*				
Extrinsic-Neither		$\chi^2 = 30.70$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 71.14$; $p < 0.001$*				
Weight	33.01% (102)	30.42% (94)	30.42% (94)	5.83% (18)	82.82	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.40$; $p = .530$				
Intrinsic-Could be Either		$\chi^2 = 0.51$; $p = .475$				
Intrinsic-Neither		$\chi^2 = 74.38$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.01$; $p = .931$				
Extrinsic-Neither		$\chi^2 = 65.52$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 64.03$; $p < 0.001$*				
Exciting	40.13% (124)	20.06% (62)	28.16% (87)	11.33% (35)	70.04	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 27.66$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 9.97$; $p = 0.002$*				
Intrinsic-Neither		$\chi^2 = 63.70$; $p = .032$*				
Extrinsic-Could be Either		$\chi^2 = 4.62$; $p = 0.003$*				
Extrinsic-Neither		$\chi^2 = 8.61$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 25.14$; $p < 0.001$*				
Win	26.21% (81)	37.54% (116)	27.18% (84)	8.74% (27)	72.97	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 9.92$; $p = 0.002$*				
Intrinsic-Could be Either		$\chi^2 = 0.18$; $p = .669$				
Intrinsic-Neither		$\chi^2 = 32.85$; $p = .006$*				

Extrinsic-Could be Either		$\chi^2 = 7.45$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 74.33$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 37.59$; $p < 0.001$*				
Best	33.33% (103)	24.92% (77)	30.10% (93)	11.33% (35)	45.41	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 4.57$; $p = 0.032$*				
Intrinsic-Could be Either		$\chi^2 = 0.64$; $p = .423$				
Intrinsic-Neither		$\chi^2 = 41.81$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.80$; $p = .180$				
Extrinsic-Neither		$\chi^2 = 19.70$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 32.66$; $p < 0.001$*				
Perform	29.45% (91)	31.39% (97)	30.42% (94)	8.41% 261)	61.95	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.27$; $p = .602$				
Intrinsic-Could be Either		$\chi^2 = 0.12$; $p = .727$				
Intrinsic-Neither		$\chi^2 = 43.84$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.03$; $p = .836$				
Extrinsic-Neither		$\chi^2 = 50.39$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 48.17$; $p < 0.001$*				
Fit	31.72% (98)	30.74% (95)	30.74% (95)	6.47% (20)	76.83	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.08$; $p = .775$				
Intrinsic-Could be Either		$\chi^2 = 0.04$; $p = .842$				
Intrinsic-Neither		$\chi^2 = 65.09$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.01$; $p = .931$				
Extrinsic-Neither		$\chi^2 = 61.12$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 62.32$; $p < 0.001$*				
Interests	59.55% (184)	16.18% (50)	18.45% (57)	5.50% (17)	283.40	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 124.57$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 110.82$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 209.12$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.54$; $p = .461$				

Extrinsic-Neither		$\chi^2 = 19.07$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 25.46$; $p < 0.001$*				
Self-Worth	60.19% (186)	14.89% (46)	18.77% (58)	5.83% (18)	301.47	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 141.91$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 117.18$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 214.00$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.66$; $p = .198$				
Extrinsic-Neither		$\chi^2 = 13.64$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 23.96$; $p < 0.001$*				
Appraisal	16.50% (51)	46.93% (145)	25.57% (33)	10.68% (79)	132.86	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 70.16$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 7.50$; $p = .006$*				
Intrinsic-Neither		$\chi^2 = 4.52$; $p = .033$*				
Extrinsic-Could be Either		$\chi^2 = 33.80$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 104.24$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 23.01$; $p < 0.001$*				
Doctor's Orders	28.16% (97)	41.42% (128)	17.15% (53)	12.94% (40)	80.40	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 12.84$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 10.78$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 19.96$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 45.78$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 62.08$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 1.50$; $p = .220$				
Popularity	15.86% (49)	64.72% (200)	15.21% (47)	3.88% (12)	370.52	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 156.87$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.02$; $p = .898$				
Intrinsic-Neither		$\chi^2 = 25.00$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 159.78$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 258.44$; $p < 0.001$*				

Could be Either-Neither	$\chi^2 = 23.89$; $p < 0.001$*					
Status	16.50% (51)	58.58% (181)	18.77% (58)	5.83% (18)	271.62	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 119.95$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 0.68$; $p = .411$					
Intrinsic-Neither	$\chi^2 = 17.86$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 105.01$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 201.41$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 24.89$; $p < 0.001$*					
Want	49.84% (154)	21.04% (65)	18.45% (57)	10.36% (32)	143.88	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 53.42$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 64.74$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 114.48$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.64$; $p = .425$					
Extrinsic-Neither	$\chi^2 = 14.70$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 9.37$; $p = 0.002$*					
Guilt	42.72% (132)	22.01% (68)	21.04% (65)	13.92% (43)	81.19	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 33.07$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 35.24$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 66.90$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.04$; $p = .425$					
Extrinsic-Neither	$\chi^2 = 14.70$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 9.37$; $p = 0.002$*					
Image	25.89% (80)	46.28% (143)	22.65% (70)	4.85% (15)	150.17	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 30.72$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 0.92$; $p = .338$					
Intrinsic-Neither	$\chi^2 = 52.69$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 41.82$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 145.11$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 41.18$; $p < 0.001$*					

Execution	30.74% (95)	25.57% (79)	28.16% (87)	15.21% (47)	22.83	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 2.37$; $p = .124$				
Intrinsic-Could be Either		$\chi^2 = 0.53$; $p = .467$				
Intrinsic-Neither		$\chi^2 = 20.99$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.66$; $p = .416$				
Extrinsic-Neither		$\chi^2 = 9.49$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 15.03$; $p < 0.001$*				
Ashamed	44.98% (139)	20.06% (62)	23.95% (74)	10.68% (33)	100.77	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 41.40$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 29.42$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 88.59$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.12$; $p = .290$				
Extrinsic-Neither		$\chi^2 = 10.89$; $p = 0.001$*				
Could be Either-Neither		$\chi^2 = 18.67$; $p < 0.001$*				
Attention	34.30% (106)	35.92% (111)	22.98% (71)	6.47% (20)	93.81	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 0.41$; $p = .522$				
Intrinsic-Could be Either		$\chi^2 = 9.23$; $p = 0.002$*				
Intrinsic-Neither		$\chi^2 = 73.87$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 13.49$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 83.90$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 34.46$; $p < 0.001$*				
Strength	45.31% (140)	21.36% (66)	25.24% (78)	7.77% (24)	122.97	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 41.99$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 27.16$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 114.73$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.75$; $p = .186$				
Extrinsic-Neither		$\chi^2 = 22.89$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 36.16$; $p < 0.001$*				
Thin	27.18% (84)	38.51% (119)	27.51% (85)	6.47% (20)	90.96	$p < 0.001$*

			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 9.21$; $p = 0.002$*				
Intrinsic-Could be Either		$\chi^2 = 0.00$; $p = .948$				
Intrinsic-Neither		$\chi^2 = 48.61$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 8.84$; $p = 0.003$*				
Extrinsic-Neither		$\chi^2 = 93.38$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 49.47$; $p < 0.001$*				
Should	31.72% (98)	22.33% (69)	26.86% (83)	18.77% (58)	15.81	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 7.93$; $p = 0.005$*				
Intrinsic-Could be Either		$\chi^2 = 2.31$; $p = .128$				
Intrinsic-Neither		$\chi^2 = 13.61$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.70$; $p = .192$				
Extrinsic-Neither		$\chi^2 = 0.79$; $p = .374$				
Could be Either-Neither		$\chi^2 = 4.80$; $p = .029$*				
Reward	20.71% (64)	42.39% (131)	28.48% (88)	8.09% (25)	106.76	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 35.90$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 5.30$; $p = .021$*				
Intrinsic-Neither		$\chi^2 = 20.07$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 14.11$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 100.16$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 43.93$; $p < 0.001$*				
Stamina	54.69% (169)	19.74% (61)	19.09% (59)	6.15% (19)	218.19	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 81.86$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 85.17$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 175.41$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.04$; $p = .840$				
Extrinsic-Neither		$\chi^2 = 26.22$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 24.35$; $p < 0.001$*				
Social Recognition	20.06% (62)	55.34% (171)	16.83% (52)	7.44% (23)	227.99	$p < 0.001$*
			Post-Hoc Analysis			

Intrinsic-Extrinsic		$\chi^2 = 86.21$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 1.11$; $p = .292$				
Intrinsic-Neither		$\chi^2 = 20.86$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 104.57$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 170.67$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 12.74$; $p < 0.001$*				
Curiosity	58.25% (180)	15.53% (48)	19.74% (61)	6.15% (19)	267.37	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 125.84$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 100.71$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 194.62$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.88$; $p = .171$				
Extrinsic-Neither		$\chi^2 = 12.93$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 23.84$; $p < 0.001$*				
Fear	50.49% (156)	17.48% (54)	20.06% (62)	11.65% (36)	153.54	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 77.71$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 62.20$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 111.82$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.04$; $p = .307$				
Extrinsic-Neither		$\chi^2 = 4.20$; $p = .040$*				
Could be Either-Neither		$\chi^2 = 9.33$; $p = 0.002$*				
Identity	45.95% (142)	26.54% (82)	19.74% (61)	7.44% (23)	128.14	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 26.15$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 45.46$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 118.64$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 2.89$; $p = 0.089$				
Extrinsic-Neither		$\chi^2 = 39.83$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 22.44$; $p < 0.001$*				
Take Control	47.90% (148)	21.04% (65)	26.21% (81)	4.53% (14)	162.64	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 52.75$; $p < 0.001$*				

Intrinsic-Could be Either		$\chi^2 = 33.95$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 152.31$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 2.29$; $p = .130$				
Extrinsic-Neither		$\chi^2 = 35.83$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 53.60$; $p < 0.001$*				
Self-Sufficient	63.11% (195)	14.89% (46)	15.86% (49)	5.83% (18)	338.81	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 151.13$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 149.41$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 227.07$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.11$; $p = .738$				
Extrinsic-Neither		$\chi^2 = 12.52$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 14.85$; $p < 0.001$*				
Lose Weight	28.48% (88)	32.04% (99)	33.33% (103)	5.83% (18)	83.70	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.86$; $p = .353$				
Intrinsic-Could be Either		$\chi^2 = 1.21$; $p = .272$				
Intrinsic-Neither		$\chi^2 = 58.31$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.03$; $p = .865$				
Extrinsic-Neither		$\chi^2 = 71.48$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 74.02$; $p < 0.001$*				
Attractive	19.09% (59)	44.34% (137)	32.36% (100)	4.21% (13)	151.36	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 47.28$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 15.46$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 33.21$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 9.24$; $p = .002$*				
Extrinsic-Neither		$\chi^2 = 137.94$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 84.38$; $p < 0.001$*				
Physique	34.63% (107)	34.30% (106)	25.24% (78)	5.83% (18)	92.03	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.00$; $p =1.000$				
Intrinsic-Could be Either		$\chi^2 = 6.41$; $p = .011$*				

Intrinsic-Neither		$\chi^2 = 80.49$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 6.41$; $p = .011$*				
Extrinsic-Neither		$\chi^2 = 80.49$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 45.40$; $p < 0.001$*				
Empowered	47.57% (147)	22.33% (69)	22.98% (71)	7.12% (22)	139.43	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 45.04$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 41.47$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 127.27$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.08$; $p = .774$				
Extrinsic-Neither		$\chi^2 = 26.96$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 29.80$; $p < 0.001$*				
Beliefs	60.84% (188)	11.33% (35)	21.04% (65)	6.80% (21)	306.89	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 168.52$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 103.14$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 206.13$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 11.35$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 3.84$; $p = .050$*				
Could be Either-Neither		$\chi^2 = 27.03$; $p < 0.001$*				
Physical Fitness	41.75% (129)	25.57% (79)	29.45% (91)	3.24% (10)	129.24	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 18.68$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 9.01$; $p = .003$*				
Intrinsic-Neither		$\chi^2 = 132.89$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.80$; $p = .180$				
Extrinsic-Neither		$\chi^2 = 62.36$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 81.36$; $p < 0.001$*				
Failure	30.74% (95)	20.71% (64)	34.63% (107)	13.92% (43)	45.24	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 8.53$; $p = .003$*				
Intrinsic-Could be Either		$\chi^2 = 0.88$; $p = .349$				
Intrinsic-Neither		$\chi^2 = 26.83$; $p < 0.001$*				

Extrinsic-Could be Either	$\chi^2 = 14.77$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 5.42$; $p = .020$*					
Could be Either-Neither	$\chi^2 = 36.88$; $p < 0.001$*					
Purpose	56.63% (175)	16.50% (51)	22.01% (68)	4.85% (15)	251.82	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 111.06$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 79.45$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 199.02$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 3.34$; $p = .068$					
Extrinsic-Neither	$\chi^2 = 21.95$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 40.09$; $p < 0.001$*					
Important	36.57% (113)	16.50% (51)	33.33% (103)	13.59% (42)	65.72	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 32.66$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 0.70$; $p = .402$					
Intrinsic-Neither	$\chi^2 = 41.48$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 24.09$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 0.61$; $p = .436$					
Could be Either-Neither	$\chi^2 = 31.86$; $p < 0.001$*					
Functionality	37.22% (115)	22.65% (70)	28.16% (87)	11.97% (37)	56.99	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 17.52$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 6.97$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 54.64$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 2.46$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 11.46$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 24.00$; $p < 0.001$*					
Connection	34.30% (106)	32.36% (100)	27.51% (85)	5.83% (18)	85.01	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = .260$; $p = .610$					
Intrinsic-Could be Either	$\chi^2 = 2.15$; $p = .142$					
Intrinsic-Neither	$\chi^2 = 77.88$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.92$; $p = .338$					

Extrinsic-Neither		$\chi^2 = 70.22$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 56.83$; $p < 0.001$*				
Fame	13.59% (42)	61.49% (190)	16.18% (50)	8.74% (27)	309.04	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 157.14$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.82$; $p = .366$				
Intrinsic-Neither		$\chi^2 = 3.67$; $p = .056$				
Extrinsic-Could be Either		$\chi^2 = 139.27$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 195.06$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 7.83$; $p = 0.005$*				
Psychological Health	64.72% (200)	13.59% (42)	16.18% (50)	5.50% (17)	369.36	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 175.75$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 157.12$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 244.57$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = .816$; $p = .366$				
Extrinsic-Neither		$\chi^2 = 11.70$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 18.20$ $p < 0.001$*				
Encouraged	37.54% (116)	33.33% (103)	24.27% (75)	4.85% (15)	103.75	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 =1.01$; $p =.315$				
Intrinsic-Could be Either		$\chi^2 = 10.79$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 98.48$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 5.24$; $p = 0.022$*				
Extrinsic-Neither		$\chi^2 = 82.19$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 50.12$; $p < 0.001$*				
Impress Others	16.50% (51)	56.63% (175)	18.12% (56)	8.74% (27)	238.80	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 112.61$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.28$; $p = .596$				
Intrinsic-Neither		$\chi^2 = 8.44$; $p = 0.004$*				
Extrinsic-Could be Either		$\chi^2 = 103.07$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 167.17$; $p < 0.001$*				

Could be Either-Neither	$\chi^2 = 11.68$; $p < 0.001$*					
Better	30.42% (94)	24.92% (77)	31.07% (96)	13.59% (42)	32.63	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 2.60$; $p = .107$					
Intrinsic-Could be Either	$\chi^2 = 0.07$; $p = .795$					
Intrinsic-Neither	$\chi^2 = 25.14$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 3.50$; $p = .061$					
Extrinsic-Neither	$\chi^2 = 11.92$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 27.69$; $p < 0.001$*					
Enjoy	48.87% (151)	18.12% (56)	25.89% (80)	7.12% (22)	160.25	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 68.82$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 36.31$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 137.72$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 5.84$; $p = .016$*					
Extrinsic-Neither	$\chi^2 = 16.93$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 40.45$; $p < 0.001$*					
Compare	15.86% (49)	48.54% (150)	22.33% (69)	13.27% (41)	134.59	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 79.05$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 4.58$; $p = .032$*					
Intrinsic-Neither	$\chi^2 = 0.83$; $p = .362$					
Extrinsic-Could be Either	$\chi^2 = 47.99$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 93.70$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 9.21$; $p = 0.002$*					
Cardio	38.83% (120)	25.24% (78)	23.62% (73)	12.30% (38)	57.91	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 12.32$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 17.21$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 56.45$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.42$; $p = .515$					
Extrinsic-Neither	$\chi^2 = 17.44$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 12.57$; $p < 0.001$*					

Physical Attractiveness	22.01% (68)	46.60% (144)	25.89% (80)	5.50% (17)	144.17	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 43.12$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 1.72$; $p = .190$				
Intrinsic-Neither		$\chi^2 = 35.41$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 28.26$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 138.03$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 50.70$; $p < 0.001$*				
Money	17.15% (53)	49.8% (154)	21.7% (67)	11.3% (35)	149.12	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 77.51$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 2.02$; $p = .155$				
Intrinsic-Neither		$\chi^2 = 3.79$; $p = .052$				
Extrinsic-Could be Either		$\chi^2 = 56.31$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 109.67$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 11.17$; $p < 0.001$*				
Impression	18.45% (57)	50.49% (156)	24.27% (75)	6.80% (21)	174.74	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 73.54$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 3.45$; $p = .063$				
Intrinsic-Neither		$\chi^2 = 18.98$; $p = .052$				
Extrinsic-Could be Either		$\chi^2 = 46.93$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 148.50$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 36.90$; $p < 0.001$*				
Health	57.93% (179)	16.18% (50)	19.09% (59)	6.80% (21)	254.41	$p < 0.001$*
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 117.74$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 97.00$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 187.11$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 =1.33$; $p = .250$				
Extrinsic-Neither		$\chi^2 = 13.36$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 22.45$; $p < 0.001$*				

Internal	66.99% (207)	13.92% (43)	12.30% (38)	6.80% (21)	399.04	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 185.00$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 195.00$; $p < 0.001$*				
	Intrinsic-Neither	$\chi^2 = 245.07$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 0.23$; $p = .636$				
	Extrinsic-Neither	$\chi^2 = 8.42$; $p = 0.004$*				
	Could be Either-Neither	$\chi^2 = 5.97$; $p = 0.015$*				
Skills	44.01% (136)	17.80% (55)	30.42% (94)	7.77% (24)	120.04	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 46.75$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 10.96$; $p < 0.001$*				
	Intrinsic-Neither	$\chi^2 = 105.32$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 13.16$; $p < 0.001$*				
	Extrinsic-Neither	$\chi^2 = 15.44$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 53.45$; $p < 0.001$*				
Obligation	30.42% (94)	35.60% (110)	25.89% (80)	8.09% (25)	70.76	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 2.09$; $p = .149$				
	Intrinsic-Could be Either	$\chi^2 = 1.79$; $p = .182$				
	Intrinsic-Neither	$\chi^2 = 48.7$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 87.69$; $p = 0.006$*				
	Extrinsic-Neither	$\chi^2 = 68.75$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 33.12$; $p < 0.001$*				
Ideal	33.66% (104)	24.27% (75)	35.28% (109)	6.80% (21)	87.90	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 6.58$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 0.57$; $p = .450$				
	Intrinsic-Neither	$\chi^2 = 68.86$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 10.98$; $p < 0.001$*				
	Extrinsic-Neither	$\chi^2 = 35.88$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 80.37$; $p < 0.001$*				
Lean	29.77% (92)	33.66% (104)	28.16% (87)	8.41% (26)	64.39	$p < 0.001$*

			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 1.06$; $p = 302$				
	Intrinsic-Could be Either	$\chi^2 = 0.12$; $p = .725$				
	Intrinsic-Neither	$\chi^2 = 46.58$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 1.91$; $p = .167$				
	Extrinsic-Neither	$\chi^2 = 60.25$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 42.28$; $p < 0.001$*				
Passion	57.28% (177)	18.77% (58)	17.15% (53)	6.80% (21)	253.59	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 102.39$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 111.81$; $p < 0.001$*				
	Intrinsic-Neither	$\chi^2 = 187.11$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 0.27$; $p = .601$				
	Extrinsic-Neither	$\chi^2 = 19.83$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 15.69$; $p < 0.001$*				
Challenge	30.42% (94)	22.01% (68)	38.83% (120)	8.74% (27)	82.72	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 6.00$; $p = .014$*				
	Intrinsic-Could be Either	$\chi^2 = 4.41$; $p = .036$*				
	Intrinsic-Neither	$\chi^2 = 48.17$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 20.43$; $p < 0.001$*				
	Extrinsic-Neither	$\chi^2 = 21.70$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 78.19$; $p < 0.001$*				
Independence	57.93% (179)	18.45% (57)	18.12% (56)	5.50% (17)	267.02	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 107.28$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 109.16$; $p < 0.001$*				
	Intrinsic-Neither	$\chi^2 = 202.47$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 0.01$; $p = .917$				
	Extrinsic-Neither	$\chi^2 = 24.52$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 23.59$; $p < 0.001$*				
Approval	21.04% (65)	50.16% (155)	22.01% (68)	6.80% (21)	168.67	$p < 0.001$*
			Post-Hoc Analysis			

Intrinsic-Extrinsic	$\chi^2 = 60.25$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 0.15$; $p = .697$					
Intrinsic-Neither	$\chi^2 = 26.10$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 54.75$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 146.84$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 29.90$; $p < 0.001$*					
Mobility	37.22% (115)	26.54% (82)	24.92% (77)	11.33% (35)	59.21	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 8.98$; $p = 0.003$*					
Intrinsic-Could be Either	$\chi^2 = 12.52$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 59.59$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.30$; $p = .582$					
Extrinsic-Neither	$\chi^2 = 24.06$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 19.18$; $p < 0.001$*					
Friends	28.80% (89)	41.42% (128)	24.92% (77)	4.85% (15)	112.44	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 10.73$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 0.52$; $p = .472$					
Intrinsic-Neither	$\chi^2 = 63.14$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 15.87$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 115.73$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 53.94$; $p < 0.001$*					
Flexible	41.10% (127)	22.65% (70)	28.16% (87)	7.77% (24)	95.32	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 23.32$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 11.52$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 94.47$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 2.15$; $p = .143$					
Extrinsic-Neither	$\chi^2 = 28.35$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 44.54$; $p < 0.001$*					
Beneficial	33.01% (102)	22.65% (70)	34.30% (106)	10.03% (31)	63.13	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 8.70$; $p = 0.003$*					

Intrinsic-Could be Either	$\chi^2 = 0.18$; $p = .672$					
Intrinsic-Neither	$\chi^2 = 47.61$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 11.34$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 16.31$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 53.14$; $p < 0.001$*					
Coordination	37.86% (117)	30.42% (94)	24.27% (75)	7.44% (23)	84.39	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic	$\chi^2 = 3.44$; $p = .064$					
Intrinsic-Could be Either	$\chi^2 = 13.18$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 82.62$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 3.21$; $p = .073$					
Extrinsic-Neither	$\chi^2 = 55.29$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 33.70$; $p < 0.001$*					
Value	41.75% (129)	21.36% (66)	32.36% (100)	4.53% (14)	129.92	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic	$\chi^2 = 21.30$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 5.75$; $p = .016$*					
Intrinsic-Neither	$\chi^2 = 122.87$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 10.54$; $p = 0.001$*					
Extrinsic-Neither	$\chi^2 = 38.75$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 81.94$; $p < 0.001$*					
Personal Best	56.63% (175)	20.71% (64)	16.50% (51)	6.15% (19)	248.89	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic	$\chi^2 = 88.95$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 112.61$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 189.11$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 1.80$; $p = .180$					
Extrinsic-Neither	$\chi^2 = 28.13$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 16.47$; $p < 0.001$*					
Belonging	30.74% (95)	37.54% (116)	23.62% (73)	8.09% (25)	79.45	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic	$\chi^2 = 3.14$; $p = .076$					
Intrinsic-Could be Either	$\chi^2 = 3.55$; $p = .060$					

Intrinsic-Neither		$\chi^2 = 51.64$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 13.25$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 77.09$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 29.75$; $p < 0.001$*				
Muscle	33.66% (104)	32.36% (100)	24.92% (77)	9.06% (28)	64.97	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.18$; $p = .671$				
Intrinsic-Could be Either		$\chi^2 = 6.04$; $p = .014$*				
Intrinsic-Neither		$\chi^2 = 57.77$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 4.14$; $p = .042$*				
Extrinsic-Neither		$\chi^2 = 52.03$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 28.39$; $p < 0.001$*				
Goals	50.16% (155)	18.45% (57)	25.24% (78)	6.15% (19)	175.89	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 72.27$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 42.38$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 152.19$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 4.55$; $p = .033$*				
Extrinsic-Neither		$\chi^2 = 21.63$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 43.55$; $p < 0.001$*				
First	25.24% (78)	31.72% (98)	21.04% (65)	22.01% (68)	10.95	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 3.47$; $p = .062$				
Intrinsic-Could be Either		$\chi^2 = 1.09$; $p = .297$				
Intrinsic-Neither		$\chi^2 = 0.72$; $p = .396$				
Extrinsic-Could be Either		$\chi^2 = 8.40$; $p = .004$*				
Extrinsic-Neither		$\chi^2 = 7.32$; $p = .007$*				
Could be Either-Neither		$\chi^2 = 0.04$; $p = .846$				
Recognition	18.12% (56)	53.40% (165)	21.04% (65)	7.44% (23)	200.26	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 87.20$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 1.02$; $p = .313$				
Intrinsic-Neither		$\chi^2 = 15.78$; $p < 0.001$*				

Extrinsic-Could be Either		$\chi^2 = 71.00$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 158.41$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 24.22$; $p < 0.001$*				
Influencer	16.18% (50)	53.07% (164)	23.62% (73)	7.12% (22)	202.03	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 96.55$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 5.79$; $p = .016$*				
Intrinsic-Neither		$\chi^2 = 12.30$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 58.35$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 159.36$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 33.27$; $p < 0.001$*				
Physical Health	52.43% (162)	15.21% (47)	27.18% (84)	5.18% (16)	211.68	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 99.31$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 42.62$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 172.56$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 13.86$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 16.96$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 56.21$; $p < 0.001$*				
Awards	15.53% (48)	57.28% (177)	22.01% (68)	5.18% (16)	263.31	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 121.80$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 4.23$; $p = .040$*				
Intrinsic-Neither		$\chi^2 = 17.82$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 85.15$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 201.66$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 31.18$; $p < 0.001$*				
Unpleasant	32.36% (100)	18.12% (56)	30.74% (95)	18.77% (58)	29.46	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 16.53$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.03$; $p = .864$				
Intrinsic-Neither		$\chi^2 = 14.17$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 15.19$; $p < 0.001$*				

Extrinsic-Neither		$\chi^2 = 0.10$; $p = .757$				
Could be Either-Neither		$\chi^2 = 12.93$; $p < 0.001$*				
Community	22.98% (71)	46.93% (145)	24.27% (75)	5.83% (18)	140.55	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 36.33$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 =$; $p = .925$				
Intrinsic-Neither		$\chi^2 = 36.96$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 35.26$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 135.37$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 41.03$; $p < 0.001$*				
Dedication	54.05% (167)	16.83% (52)	22.98% (71)	6.15% (19)	212.36,	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 95.74$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 62.08$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 171.05$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 4.41$; $p = .036$*				
Extrinsic-Neither		$\chi^2 = 17.30$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 37.16$; $p < 0.001$*				
Mental Health	61.17% (189)	13.59% (42)	20.39% (33)	4.85% (15)	318.89	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 155.34$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 111.69$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 228.13$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 5.05$; $p = 0.025$*				
Extrinsic-Neither		$\chi^2 = 14.07$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 33.74$; $p < 0.001$*				
Shame	35.92% (111)	23.62% (73)	28.48% (88)	11.97% (37)	50.55	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 10.44$; $p = 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 3.88$; $p = 0.049$*				
Intrinsic-Neither		$\chi^2 = 49.54$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 1.62$; $p = .203$				
Extrinsic-Neither		$\chi^2 = 15.70$; $p < 0.001$*				

Could be Either-Neither	$\chi^2 = 26.87$; $p < 0.001$*					
Technique	40.78% (126)	23.95% (74)	24.60% (76)	10.68% (33)	77.27	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 20.48$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 18.87$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 75.47$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 0.04$; $p = .852$					
Extrinsic-Neither	$\chi^2 = 19.74$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 21.35$; $p < 0.001$*					
Knowledge	55.02% (170)	18.12% (56)	22.65% (70)	4.21% (13)	234.85	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 94.26$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 69.88$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 195.82$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 2.22$; $p = .136$					
Extrinsic-Neither	$\chi^2 = 30.12$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 46.25$; $p < 0.001$*					
Pleasure	45.95% (142)	17.80% (55)	27.83% (86)	8.41% (26)	127.33	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 56.07$; $p < 0.001$*					
Intrinsic-Could be Either	$\chi^2 = 18.52$; $p < 0.001$*					
Intrinsic-Neither	$\chi^2 = 109.48$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 10.99$; $p < 0.001$*					
Extrinsic-Neither	$\chi^2 = 11.93$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 43.34$; $p < 0.001$*					
Build Muscle	33.33% (103)	33.98% (105)	26.21% (81)	6.47% (20)	82.59	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.00$; $p = 1.00$					
Intrinsic-Could be Either	$\chi^2 = 3.68$; $p = .055$					
Intrinsic-Neither	$\chi^2 = 72.22$; $p < 0.001$*					
Extrinsic-Could be Either	$\chi^2 = 3.68$; $p = .055$					
Extrinsic-Neither	$\chi^2 = 72.22$; $p < 0.001$*					
Could be Either-Neither	$\chi^2 = 46.12$; $p < 0.001$*					

Muscular	34.30% (106)	33.01% (102)	25.89% (8)	6.80% (21)	81.36	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 0.6$; $p = .800$				
Intrinsic-Could be Either		$\chi^2 = 5.14$; $p = .023$*				
Intrinsic-Neither		$\chi^2 = 72.63$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 4.06$; $p = .044$*				
Extrinsic-Neither		$\chi^2 = 68.86$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 42.16$; $p < 0.001$*				
Fun	37.86% (117)	21.36% (66)	33.33% (103)	7.44% (23)	94.24	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 20.08$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.700$; $p = .404$				
Intrinsic-Neither		$\chi^2 = 81.30$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 13.43$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 24.22$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 68.50$; $p < 0.001$*				
Improvements	39.16% (121)	22.01% (68)	31.72% (98)	7.12% (22)	97.89	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 22.79$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 =3.69$; $p = .055$				
Intrinsic-Neither		$\chi^2 = 91.56$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 8.33$; $p = 0.004$*				
Extrinsic-Neither		$\chi^2 = 27.46$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 61.94$; $p < 0.001$*				
Personal Value	61.81% (191)	15.86% (49)	17.15% (53)	5.18% (16)	323.73	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 143.16$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 134.65$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 229.06$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.19$; $p = .665$				
Extrinsic-Neither		$\chi^2 = 18.70$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 22.30$; $p < 0.001$*				
Role Model	28.16% (87)	39.48% (122)	26.21% (81)	6.15% (19)	95.81	$p < 0.001$*

			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 143.16$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 0.07$; $p = .788$				
	Intrinsic-Neither	$\chi^2 = 52.52$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 10.98$; $p < 0.001$*				
	Extrinsic-Neither	$\chi^2 = 98.52$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 49.10$; $p < 0.001$*				
External	12.30% (38)	65.70% (203)	15.21% (47)	6.80% (21)	382.55	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 191.54$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 1.10$; $p = .294$				
	Intrinsic-Neither	$\chi^2 = 5.41$; $p = .020$*				
	Extrinsic-Could be Either	$\chi^2 = 169.61$; $p < 0.001$*				
	Extrinsic-Neither	$\chi^2 = 238.66$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 11.15$; $p < 0.001$*				
Toned	30.42% (94)	32.69% (101)	27.18% (84)	9.71% (30)	55.43	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 0.37$; $p = .606$				
	Intrinsic-Could be Either	$\chi^2 = 0.94$; $p = .332$				
	Intrinsic-Neither	$\chi^2 = 43.28$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 2.20$; $p = .138$				
	Extrinsic-Neither	$\chi^2 = 49.77$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 32.22$; $p < 0.001$*				
Financial Success	22.01% (68)	37.22% (115)	32.69% (101)	8.09% (25)	83.88	$p < 0.001$*
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 16.85$; $p < 0.001$*				
	Intrinsic-Could be Either	$\chi^2 = 7.73$; $p < 0.001$*				
	Intrinsic-Neither	$\chi^2 = 25.13$; $p < 0.001$*				
	Extrinsic-Could be Either	$\chi^2 = 1.80$; $p = .179$				
	Extrinsic-Neither	$\chi^2 = 77.09$; $p < 0.001$*				
	Could be Either-Neither	$\chi^2 = 57.39$; $p < 0.001$*				
Improved Form	37.86% (117)	26.86% (83)	26.21% (81)	9.06% (28)	73.50	$p < 0.001$*
			Post-Hoc Analysis			

Intrinsic-Extrinsic		$\chi^2 = 9.98$; $p = 0.002$*				
Intrinsic-Could be Either		$\chi^2 = 10.55$; $p = 0.001$*				
Intrinsic-Neither		$\chi^2 = 74.90$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 0.01$; $p = .928$				
Extrinsic-Neither		$\chi^2 = 33.13$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 32.16$; $p < 0.001$*				
Perks	18.77% (58)	44.98% (139)	26.21% (81)	10.03% (31)	112.81	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 51.84$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 4.89$; $p = .027$*				
Intrinsic-Neither		$\chi^2 = 8.77$; $p = 0.003$*				
Extrinsic-Could be Either		$\chi^2 = 25.92$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 96.31$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 25.93$; $p < 0.001$*				
Appearance	19.09% (59)	49.19% (152)	27.18% (84)	4.21% (13)	179.92	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 62.33$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 5.51$; $p = .019$*				
Intrinsic-Neither		$\chi^2 = 34.43$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 32.22$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 162.36$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 62.72$; $p < 0.001$*				
Have to	22.65% (70)	32.36% (100)	26.86% (83)	17.80% (55)	16.78	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 6.17$; $p = .013$*				
Intrinsic-Could be Either		$\chi^2 = 0.99$; $p = .319$				
Intrinsic-Neither		$\chi^2 = 2.26$; $p = .133$				
Extrinsic-Could be Either		$\chi^2 = 2.23$; $p = .135$				
Extrinsic-Neither		$\chi^2 = 15.72$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 6.22$; $p = .013$*				
Strong	39.16% (121)	21.36% (66)	32.36% (100)	6.80% (21)	102.10	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 24.11$; $p < 0.001$*				

Intrinsic-Could be Either		$\chi^2 = 2.60$; $p = .107$				
Intrinsic-Neither		$\chi^2 = 92.92$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 11.10$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 27.03$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 67.62$; $p < 0.001$*				
Idealized	28.80% (89)	34.95% (108)	26.21% (81)	9.39% (29)	62.21	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 3.36$; $p = .067$				
Intrinsic-Could be Either		$\chi^2 = 0.46$; $p = .498$				
Intrinsic-Neither		$\chi^2 = 38.10$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 6.30$; $p = .012$				
Extrinsic-Neither		$\chi^2 = 61.86$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 30.76$; $p < 0.001$*				
Appealing	24.60% (76)	36.57% (113)	30.42% (94)	8.09% (25)	74.50	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 11.29$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 2.82$; $p = .093$				
Intrinsic-Neither		$\chi^2 = 29.48$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 2.87$; $p = .090$				
Extrinsic-Neither		$\chi^2 = 72.51$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 48.78$; $p < 0.001$*				
Gain Weight	31.07% (96)	35.28% (109)	25.57% (79)	7.77% (24)	74.33	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 0.98$; $p = .322$				
Intrinsic-Could be Either		$\chi^2 = 2.63$; $p = .105$				
Intrinsic-Neither		$\chi^2 = 56.07$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 6.81$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 70.23$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 36.16$; $p < 0.001$*				
Energy	51.78% (160)	20.06% (62)	21.36% (66)	6.47% (20)	183.41	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 70.08$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 62.68$; $p < 0.001$*				

Intrinsic-Neither		$\chi^2 = 154.26$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = .244$; $p = .621$				
Extrinsic-Neither		$\chi^2 = 23.35$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 27.98$; $p < 0.001$*				
Compete	21.68% (67)	42.39% (131)	26.54% (82)	9.06% (28)	94.68	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 29.82$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 2.16$; $p = .142$				
Intrinsic-Neither		$\chi^2 = 19.84$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 16.29$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 90.81$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 34.10$; $p < 0.001$*				
Personality	54.69% (169)	19.42% (60)	20.39% (63)	5.18% (16)	226.57	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 86.56$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 79.97$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 185.85$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = .161$; $p = .688$				
Extrinsic-Neither		$\chi^2 = 28.99$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 33.02$; $p < 0.001$*				
Relationships	32.69% (101)	38.19% (118)	23.62% (73)	4.85% (15)	105.59	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 1.64$; $p = .200$				
Intrinsic-Could be Either		$\chi^2 = 5.55$; $p = .018$*				
Intrinsic-Neither		$\chi^2 = 80.31$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 13.18$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 101.29$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 47.85$; $p < 0.001$*				
Growth	49.19% (152)	20.39% (63)	23.62% (73)	6.47% (20)	163.70	$p < 0.001$*
Post-Hoc Analysis						
Intrinsic-Extrinsic		$\chi^2 = 60.08$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 45.63$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 145.24$; $p < 0.001$*				

Extrinsic-Could be Either		$\chi^2 = 1.13$; $p = .288$				
Extrinsic-Neither		$\chi^2 = 25.68$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 36.50$; $p < 0.001$*				
Worry	50.81% (157)	16.50% (51)	21.36% (66)	11.00% (34)	157.13	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 82.82$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 55.25$; $p < 0.001$*				
Intrinsic-Neither		$\chi^2 = 116.17$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 3.34$; $p = .068$				
Extrinsic-Neither		$\chi^2 = 3.39$; $p = .047$				
Could be Either-Neither		$\chi^2 =14.24$; $p < 0.001$*				
Pressured	23.95% (74)	41.75% (129)	25.89% (80)	8.09% (25)	97.91	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 =23.20$; $p < 0.001$*				
Intrinsic-Could be Either		$\chi^2 = 0.19$; $p = .660$				
Intrinsic-Neither		$\chi^2 = 29.95$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = 19.29$; $p < 0.001$*				
Extrinsic-Neither		$\chi^2 = 97.34$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 34.62$; $p < 0.001$*				
Accountability	34.63% (107)	28.16% (87)	27.83% (86)	9.06% (28)	63.24	$p < 0.001$*
		Post-Hoc Analysis				
Intrinsic-Extrinsic		$\chi^2 = 4.03$; $p = .045$*				
Intrinsic-Could be Either		$\chi^2 = 4.03$; $p = .045$*				
Intrinsic-Neither		$\chi^2 = 62.87$; $p < 0.001$*				
Extrinsic-Could be Either		$\chi^2 = .000$; $p = 1.000$				
Extrinsic-Neither		$\chi^2 = 37.08$; $p < 0.001$*				
Could be Either-Neither		$\chi^2 = 37.08$; $p < 0.001$*				

Table 5

Expert versus General Population Fisher's Exact Tests

	Intrinsic	Extrinsic	Either Or	Neither Nor	Pearson Chi-Square	Exact Sig. (2-sided)
Self-Acceptance	100% (13)	0% (0)	0% (0)	0% (0)	5.037	.120
	65.4% (204)	13.8% (43)	16% (50)	4.8% (15)		
Peer Pressure	0% (0)	92.3 % (12)	0% (0)	7.7% (1)	8.150	.024*
	20.5% (64)	53.2% (166)	18.6% (58)	7.7% (24)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.540$; $p = .040$					
Intrinsic-Could be Either						
Intrinsic-Neither	$\chi^2 = 2.589$; $p = .281$					
Extrinsic-Could be Either	$\chi^2 = 4.120$; $p = .042$					
Extrinsic-Neither	$\chi^2 = 0.275$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 2.348$; $p = .301$					
Fitness	23.1% (3)	23.1% (3)	53.8% (7)	0% (0)	3.417	.281
	42.9% (134)	21.2% (66)	30.1% (94)	5.8% (18)		
Social Interaction	46.2% (6)	7.7% (1)	46.2% (6)	0% (0)	12.887	.002*
	19.9% (62)	52.6% (164)	22.1% (69)	5.4% (17)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 11.159$; $p = .003$*					
Intrinsic-Could be Either	$\chi^2 = 0.031$; $p = 1.000$					
Intrinsic-Neither	$\chi^2 = 1.614$; $p = .342$					
Extrinsic-Could be Either	$\chi^2 = 9.955$; $p = .004$*					
Extrinsic-Neither	$\chi^2 = 0.104$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 1.455$; $p = .589$					
Boredom	23.1% (3)	0% (0)	15.4% (2)	61.5% (8)	15.696	.000*
	48.1% (150)	18.6% (58)	19.9% (62)	13.5% (42)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 1.154$; $p = .563$					
Intrinsic-Could be Either	$\chi^2 = 0.272$; $p = .633$					

Intrinsic-Neither	$\chi^2 = 14.493$; $p = .001$*					
Extrinsic-Could be Either	$\chi^2 = 1.843$; $p = .497$					
Extrinsic-Neither	$\chi^2 = 10.022$; $p = .002$*					
Could be Either-Neither	$\chi^2 = 5.815$; $p = .021$*					
Influence	0% (0)	53.8% (7)	38.5% (5)	7.7% (1)	4.967	.139
	20.5% (64)	51.9% (162)	23.1% (72)	4.5% (14)		
Self-Esteem	38.5% (5)	7.7% (1)	53.8% (7)	0% (0)	6.438	.062
	62.8% (196)	13.5% (42)	20.2% (63)	3.5% (11)		
Mastery	84.6% (11)	0% (0)	15.4% (2)	0% (0)	7.199	.045*
	43.6% (136)	18.3% (57)	29.2% (91)	9.0% (28)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.508$; $p = .037$					
Intrinsic-Could be Either	$\chi^2 = 3.162$; $p = .086$					
Intrinsic-Neither	$\chi^2 = 2.236$; $p = .216$					
Extrinsic-Could be Either	$\chi^2 = 1.242$; $p = .526$					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 0.612$; $p = 1.000$					
Satisfaction	61.5% (8)	0% (0)	38.5% (5)	0% (0)	2.845	.364
	51.3% (160)	17.0% (53)	28.2% (88)	3.5% (11)		
Weight	0% (0)	30.8% (4)	61.5% (8)	7.7% (1)	9.377	.016*
	33.0% (103)	30.8% (96)	30.4% (95)	5.8% (18)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.147$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 0.063$; $p = .588$					
Intrinsic-Neither	$\chi^2 = 1.295$; $p = .374$					
Extrinsic-Could be Either	$\chi^2 = 5.466$; $p = .156$					
Extrinsic-Neither	$\chi^2 = 8.323$; $p = .007$*					
Could be Either-Neither	$\chi^2 = 4.203$; $p = .057$					
Exciting	69.2% (9)	0% (0)	15.4% (2)	15.4% (2)	6.006	.084
	39.7% (124)	20.5% (64)	27.9% (87)	11.9% (37)		
Win	0% (0)	61.5% (8)	30.8% (4)	7.7% (1)	5.886	.095
	26.0% (81)	37.8% (118)	27.6% (86)	8.7% (27)		
Best	0% (0)	23.1% (3)	69.2% (9)	7.7% (1)	10.444	.008*

	33.0% (103)	25.3% (79)	30.1% (94)	11.5% (36)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 3.830$; $p = .085$					
Intrinsic-Could be Either	$\chi^2 = 9.411$; $p = .003$*					
Intrinsic-Neither	$\chi^2 = 2.804$; $p = .264$					
Extrinsic-Could be Either	$\chi^2 = 1.942$; $p = .232$					
Extrinsic-Neither	$\chi^2 = 0.072$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 1.495$; $p = .291$					
Perform	0% (0)	7.7% (1)	84.6% (11)	7.7% (1)	15.043	.001*
	29.5% (92)	31.1% (97)	31.1% (97)	8.3% (26)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.944$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 9.916$; $p = .001$*					
Intrinsic-Neither	$\chi^2 = 3.436$; $p = .227$					
Extrinsic-Could be Either	$\chi^2 = 7.866$; $p = .006$*					
Extrinsic-Neither	$\chi^2 = 0.968$; $p = .387$					
Could be Either-Neither	$\chi^2 = 1.120$; $p = .459$					
Fit	30.8% (4)	0% (0)	69.2% (9)	0% (0)	9.736	.013*
	31.7% (99)	30.8% (96)	31.1% (97)	6.4% (20)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 3.805$; $p = .122$					
Intrinsic-Could be Either	$\chi^2 = 1.901$; $p = .252$					
Intrinsic-Neither	$\chi^2 = 0.803$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 8.531$; $p = .004$*					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 1.829$; $p = .353$					
Interests	84.6% (11)	0% (0)	15.4% (2)	0% (0)	3.081	.356
	59.6% (186)	16.3% (51)	18.6% (58)	5.4% (17)		
Self-Worth	46.2% (6)	0% (0)	53.8% (7)	0% (0)	7.920	.027*
	60.9% (190)	14.7% (46)	18.6% (58)	5.8% (18)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 1.444$; $p = .598$					
Intrinsic-Could be Either	$\chi^2 = 6.128$; $p = .021$					

Intrinsic-Neither	$\chi^2 = 0.567$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 5.287$; $p = .040$					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 2.117$; $p = .338$					
Appraisal	0% (0)	15.4% (2)	38.5% (5)	46.2% (6)	14.638	.001*
	16.3% (51)	47.8% (149)	25.3% (79)	10.6% (33)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.682$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 3.152$; $p = .156$					
Intrinsic-Neither	$\chi^2 = 8.407$; $p = .005$*					
Extrinsic-Could be Either	$\chi^2 = 4.000$; $p = .101$					
Extrinsic-Neither	$\chi^2 = 15.192$; $p = .001$*					
Could be Either-Neither	$\chi^2 = 2.910$; $p = .101$					
Doctor's Orders	0% (0)	61.5% (8)	23.1% (3)	15.4% (2)	6.258	.072
	27.9% (87)	41.7% (130)	17.0% (53)	13.5% (42)		
Popularity	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	3.120	.323
	15.7% (49)	65.1% (203)	15.4% (48)	3.8% (12)		
Status	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	4.442	.179
	16.3% (51)	59.0% (184)	18.9% (59)	5.8% (18)		
Want	38.5% (5)	7.7% (1)	53.8% (7)	0% (0)	7.522	.033*
	49.4% (154)	21.5% (67)	18.9% (59)	10.3% (32)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.519$; $p = .672$					
Intrinsic-Could be Either	$\chi^2 = 5.143$; $p = .044$					
Intrinsic-Neither	$\chi^2 = 1.033$; $p = .592$					
Extrinsic-Could be Either	$\chi^2 = 4.979$; $p = .032$					
Extrinsic-Neither	$\chi^2 = 0.475$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 3.655$; $p = .092$					
Guilt	7.7% (1)	61.5% (8)	23.1% (3)	7.7% (1)	11.129	.005*
	43.3% (135)	21.8% (68)	21.2% (66)	13.8% (43)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 11.498$; $p = .001$*					
Intrinsic-Could be Either	$\chi^2 = 3.123$; $p = .112$					

Intrinsic-Neither	$\chi^2 = 0.715$; $p = .430$					
Extrinsic-Could be Either	$\chi^2 = 1.969$; $p = .215$					
Extrinsic-Neither	$\chi^2 = 2.736$; $p = .152$					
Could be Either-Neither	$\chi^2 = 0.339$; $p = 1.000$					
Image	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	9.063	.016*
	25.6% (80)	47.1% (147)	22.4% (70)	4.8% (15)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 6.357$; $p = .010$					
Intrinsic-Could be Either	$\chi^2 = 1.134$; $p = .470$					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 3.468$; $p = .070$					
Extrinsic-Neither	$\chi^2 = 1.216$; $p = .603$					
Could be Either-Neither	$\chi^2 = 0.214$; $p = 1.000$					
Execution	15.4% (2)	23.1% (3)	0% (0)	61.5% (8)	14.774	.000*
	30.8% (96)	25.3% (79)	28.5% (89)	15.4% (48)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 1.631$; $p = .503$					
Intrinsic-Could be Either	$\chi^2 = 0.276$; $p = .675$					
Intrinsic-Neither	$\chi^2 = 8.800$; $p = .005$*					
Extrinsic-Could be Either	$\chi^2 = 2.622$; $p = .250$					
Extrinsic-Neither	$\chi^2 = 11.997$; $p = .001$*					
Could be Either-Neither	$\chi^2 = 6.150$; $p = .021$					
Ashamed	0% (0)	61.5% (8)	23.1% (3)	15.4% (2)	15.905	.000*
	44.6% (139)	20.5% (64)	24.0% (75)	10.9% (34)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 16.053$; $p < .001$*					
Intrinsic-Could be Either	$\chi^2 = 5.421$; $p = .045$					
Intrinsic-Neither	$\chi^2 = 7.811$; $p = .041$					
Extrinsic-Could be Either	$\chi^2 = 2.908$; $p = .119$					
Extrinsic-Neither	$\chi^2 = 0.882$; $p = .491$					
Could be Either-Neither	$\chi^2 = 0.172$; $p = .650$					
Attention	0% (0)	23.1% (3)	30.8% (4)	46.2% (6)	20.063	.000*
	34.0% (106)	36.5% (114)	23.1% (72)	6.4% (20)		

			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 2.755$; $p = .248$				
	Intrinsic-Could be Either	$\chi^2 = 5.704$; $p = .029$				
	Intrinsic-Neither	$\chi^2 = 25.626$; $p < .001$*				
	Extrinsic-Could be Either	$\chi^2 = 0.960$; $p = .437$				
	Extrinsic-Neither	$\chi^2 = 15.177$; $p = .001$*				
	Could be Either-Neither	$\chi^2 = 6.952$; $p = .016$				
Strength	7.7% (1)	7.7% (1)	69.2% (9)	15.4% (2)	13.665	.001*
	45.5% (142)	21.2% (66)	25.6% (80)	7.7% (24)		
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 0.304$; $p = .537$				
	Intrinsic-Could be Either	$\chi^2 = 11.785$; $p = .001$*				
	Intrinsic-Neither	$\chi^2 = 6.170$; $p = .062$				
	Extrinsic-Could be Either	$\chi^2 = 4.734$; $p = .044$				
	Extrinsic-Neither	$\chi^2 = 2.306$; $p = .188$				
	Could be Either-Neither	$\chi^2 = 0.136$; $p = 1.000$				
Thin	0% (0)	76.9% (10)	15.4% (2)	7.7% (1)	8.818	.020*
	27.2% (85)	38.8% (121)	27.6% (86)	6.4% (20)		
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 6.804$; $p = .007$*				
	Intrinsic-Could be Either	$\chi^2 = 1.954$; $p = .497$				
	Intrinsic-Neither	$\chi^2 = 4.086$; $p = .198$				
	Extrinsic-Could be Either	$\chi^2 = 2.921$; $p = .129$				
	Extrinsic-Neither	$\chi^2 = 0.222$; $p = 1.000$				
	Could be Either-Neither	$\chi^2 = 0.392$; $p = .477$				
Should	0% (0)	61.5% (8)	23.1% (3)	15.4% (2)	11.606	.003*
	32.1% (100)	22.1% (69)	26.6% (83)	19.2% (60)		
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 10.881$; $p = .001$*				
	Intrinsic-Could be Either	$\chi^2 = 3.546$; $p = .097$				
	Intrinsic-Neither	$\chi^2 = 3.266$; $p = .145$				
	Extrinsic-Could be Either	$\chi^2 = 3.075$; $p = .117$				
	Extrinsic-Neither	$\chi^2 = 2.640$; $p = .185$				

Could be Either-Neither	$\chi^2 = 0.008$; $p = 1.000$					
Reward	7.7% (1)	61.5% (8)	30.8% (4)	0% (0)	2.151	.516
	20.5% (64)	42.9% (134)	28.5% (89)	8.0% (25)		
Stamina	46.2% (6)	15.4% (2)	30.8% (4)	7.7% (1)	1.631	.620
	54.8% (171)	19.9% (62)	19.2% (60)	6.1% (19)		
Social Recognition	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	5.582	.085
	19.9% (62)	56.1% (175)	16.7% (52)	7.4% (23)		
Curiosity	100% (13)	0% (0)	0% (0)	0% (0)	7.269	.035*
	58.7% (183)	15.4% (48)	19.6% (61)	6.4% (20)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.363$; $p = .078$					
Intrinsic-Could be Either	$\chi^2 = 4.261$; $p = .043$					
Intrinsic-Neither	$\chi^2 = 1.411$; $p = .615$					
Extrinsic-Could be Either						
Extrinsic-Neither						
Could be Either-Neither						
Fear	15.4% (2)	53.8% (7)	0% (0)	30.8% (4)	16.269	.000*
	50.6% (158)	17.3% (54)	20.5% (64)	11.5% (36)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 11.820$; $p = .002$*					
Intrinsic-Could be Either	$\chi^2 = 0.807$; $p = 1.000$					
Intrinsic-Neither	$\chi^2 = 8.419$; $p = .015$					
Extrinsic-Could be Either	$\chi^2 = 7.780$; $p = .005$*					
Extrinsic-Neither	$\chi^2 = 0.054$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 6.656$; $p = .020$					
Identity	69.2% (9)	0% (0)	23.1% (3)	7.7% (1)	5.771	.088
	45.8% (143)	26.3% (82)	20.5% (64)	7.4% (23)		
Take Control	23.1% (3)	0% (0)	69.2% (9)	7.7% (1)	11.644	.004*
	48.4% (151)	20.8% (65)	26.0% (81)	4.8% (15)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.284$; $p = .557$					
Intrinsic-Could be Either	$\chi^2 = 0.807$; $p = 1.000$					
Intrinsic-Neither	$\chi^2 = 8.419$; $p = .015$					

Extrinsic-Could be Either	$\chi^2 = 6.901$; $p = .011$					
Extrinsic-Neither	$\chi^2 = 4.113$; $p = .198$					
Could be Either-Neither	$\chi^2 = 0.224$; $p = 1.000$					
Self-Sufficient	53.8% (7)	0% (0)	38.5% (5)	7.7% (1)	5.512	.090
	63.5% (198)	14.7% (46)	15.7% (49)	6.1% (19)		
Lose Weight	0% (0)	30.8% (4)	69.2% (9)	0% (0)	8.646	.024*
	28.8% (90)	32.4% (101)	33.0% (103)	5.8% (18)		
	Post-Hoc Analysis					
Intrinsic-Extrinsic	$\chi^2 = 3.500$; $p = .126$					
Intrinsic-Could be Either	$\chi^2 = 7.569$; $p = .005$*					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 1.719$; $p = .255$					
Extrinsic-Neither	$\chi^2 = 0.709$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 1.554$; $p = .359$					
Attractive	0% (0)	76.9% (10)	23.1% (3)	0% (0)	5.096	.131
	18.8% (59)	44.4% (139)	32.6% (102)	4.2% (13)		
Physique	0% (0)	61.5% (8)	38.5% (5)	0% (0)	9.329	.018*
	34.5% (108)	34.5% (108)	25.2% (79)	5.8% (18)		
	Post-Hoc Analysis					
Intrinsic-Extrinsic	$\chi^2 = 7.724$; $p = .007$*					
Intrinsic-Could be Either	$\chi^2 = 6.600$; $p = .015$					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 0.071$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 1.320$; $p = .597$					
Could be Either-Neither	$\chi^2 = 1.127$; $p = .583$					
Empowered	84.6% (11)	0% (0)	7.7% (1)	7.7% (1)	7.270	.043*
	47.6% (149)	22.0% (69)	23.0% (72)	7.3% (23)		
	Post-Hoc Analysis					
Intrinsic-Extrinsic	$\chi^2 = 4.983$; $p = .037$					
Intrinsic-Could be Either	$\chi^2 = 3.110$; $p = .110$					
Intrinsic-Neither	$\chi^2 = 0.251$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 0.952$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 2.906$; $p = .258$					

Could be Either-Neither	$\chi^2 = 0.700$; $p = .436$					
Beliefs	30.8% (4)	0% (0)	30.8% (4)	38.5% (5)	13.185	.002*
	61.0% (191)	11.2% (35)	21.1% (66)	6.7% (21)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.731$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 2.361$; $p = .214$					
Intrinsic-Neither	$\chi^2 = 17.332$; $p = .001$*					
Extrinsic-Could be Either	$\chi^2 = 2.079$; $p = .299$					
Extrinsic-Neither	$\chi^2 = 7.332$; $p = .011$					
Could be Either-Neither	$\chi^2 = 4.077$; $p = .058$					
Physical Fitness	30.8% (4)	15.4% (2)	46.2% (6)	7.7% (1)	3.139	.335
	41.5% (130)	25.2% (79)	30.0% (94)	3.2% (10)		
Failure	0% (0)	23.1% (3)	38.5% (5)	38.5% (5)	9.668	.012*
	31.0% (97)	20.8% (65)	34.5% (108)	13.7% (43)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.359$; $p = .068$					
Intrinsic-Could be Either	$\chi^2 = 4.397$; $p = .063$					
Intrinsic-Neither	$\chi^2 = 10.465$; $p = .003$*					
Extrinsic-Could be Either	$\chi^2 = 0.000$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 1.580$; $p = .272$					
Could be Either-Neither	$\chi^2 = 2.076$; $p = .165$					
Purpose	61.5% (8)	0% (0)	23.1% (3)	15.4% (2)	4.749	.165
	56.9% (178)	16.3% (51)	22.0% (69)	4.8% (15)		
Important	15.4% (2)	0% (0)	61.5% (8)	23.1% (3)	6.904	.049*
	36.4% (114)	16.3% (51)	33.2% (104)	14.1% (44)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.890$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 3.990$; $p = .056$					
Intrinsic-Neither	$\chi^2 = 2.442$; $p = .145$					
Extrinsic-Could be Either	$\chi^2 = 3.831$; $p = .058$					
Extrinsic-Neither	$\chi^2 = 3.358$; $p = .107$					
Could be Either-Neither	$\chi^2 = 0.030$; $p = 1.000$					
Functionality	23.1% (3)	7.7% (1)	23.1% (3)	46.2% (6)	9.035	.017*

	37.7% (118)	22.4% (70)	27.8% (87)	12.1% (38)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.252$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 0.136$; $p = .702$					
Intrinsic-Neither	$\chi^2 = 7.788$; $p = .012$					
Extrinsic-Could be Either	$\chi^2 = 0.607$; $p = .631$					
Extrinsic-Neither	$\chi^2 = 7.105$; $p = .012$					
Could be Either-Neither	$\chi^2 = 5.007$; $p = .058$					
Connection	84.6% (11)	7.7% (1)	7.7% (1)	0% (0)	11.141	.006*
	33.9% (106)	31.9% (100)	28.4% (89)	5.8% (18)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 7.373$; $p = .007$*					
Intrinsic-Could be Either	$\chi^2 = 6.403$; $p = .014$					
Intrinsic-Neither	$\chi^2 = 1.842$; $p = .359$					
Extrinsic-Could be Either	$\chi^2 = 0.007$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 0.180$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 0.202$; $p = 1.000$					
Fame	0% (0)	100% (13)	0% (0)	0% (0)	5.876	.067
	13.4% (42)	62.0% (194)	16.0% (50)	8.6% (27)		
Psychological Health	92.3 % (12)	0% (0)	0% (0)	7.7% (1)	4.825	.123
	65.2% (204)	13.4% (42)	16.0% (50)	5.4% (17)		
Encouraged	30.8% (4)	0% (0)	53.8% (7)	15.4% (2)	11.916	.004*
	37.1% (116)	33.2% (104)	24.9% (78)	4.8% (15)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.530$; $p = .125$					
Intrinsic-Could be Either	$\chi^2 = 2.355$; $p = .206$					
Intrinsic-Neither	$\chi^2 = 2.528$; $p = .161$					
Extrinsic-Could be Either	$\chi^2 = 8.894$; $p = .003$*					
Extrinsic-Neither	$\chi^2 = 12.441$; $p = 019$					
Could be Either-Neither	$\chi^2 = 0.219$; $p = .643$					
Impress Others	0% (0)	100% (13)	0% (0)	0% (0)	7.661	.029*
	16.3% (51)	57.2% (179)	17.9% (56)	8.6% (27)		
Post-Hoc Analysis						

Intrinsic-Extrinsic	$\chi^2 = 3.648$; $p = .076$					
Intrinsic-Could be Either						
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 4.001$; $p = .044$					
Extrinsic-Neither	$\chi^2 = 1.943$; $p = .377$					
Could be Either-Neither						
Better	7.7% (1)	0% (0)	76.9% (10)	15.4% (2)	12.035	.003*
	30.4% (95)	24.6% (77)	31.3% (98)	13.7% (43)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.807$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 6.728$; $p = .011$					
Intrinsic-Neither	$\chi^2 = 1.704$; $p = .239$					
Extrinsic-Could be Either	$\chi^2 = 7.537$; $p = .006$*					
Extrinsic-Neither	$\chi^2 = 3.479$; $p = .134$					
Could be Either-Neither	$\chi^2 = 1.019$; $p = .511$					
Enjoy	84.6% (11)	0% (0)	0% (0)	15.4% (2)	10.342	.008*
	49.2% (154)	17.9% (56)	25.9% (81)	7.0% (22)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.929$; $p = .070$					
Intrinsic-Could be Either	$\chi^2 = 5.653$; $p = .018$					
Intrinsic-Neither	$\chi^2 = 0.091$; $p = .672$					
Extrinsic-Could be Either						
Extrinsic-Neither	$\chi^2 = 4.786$; $p = .087$					
Could be Either-Neither	$\chi^2 = 6.881$; $p = .051$					
Compare	0% (0)	53.8% (7)	30.8% (4)	15.4% (2)	2.640	.440
	15.7% (49)	48.9% (153)	22.4% (70)	13.1% (41)		
Cardio	23.1% (3)	7.7% (1)	38.5% (5)	30.8% (4)	6.343	.072
	38.7% (121)	25.6% (80)	23.3% (73)	12.5% (39)		
Physical Attractiveness	0% (0)	84.6% (11)	15.4% (2)	0% (0)	6.563	.066
	21.7% (68)	46.6% (146)	26.2% (82)	5.4% (17)		
Money	0% (0)	100% (13)	0% (0)	0% (0)	10.552	.006*
	16.9% (53)	50.2% (157)	21.4% (67)	11.5% (36)		
Post-Hoc Analysis						

Intrinsic-Extrinsic	$\chi^2 = 4.304$; $p = .042$					
Intrinsic-Could be Either						
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 5.421$; $p = .022$					
Extrinsic-Neither	$\chi^2 = 2.938$; $p = .131$					
Could be Either-Neither						
Impression	0% (0)	69.2% (9)	23.1% (3)	7.7% (1)	3.374	.293
	18.2% (57)	50.8% (159)	24.3% (76)	6.7% (21)		
Health	61.5% (8)	0% (0)	30.8% (4)	7.7% (1)	3.121	.303
	57.8% (181)	16.0% (50)	19.5% (61)	6.7% (21)		
Internal	76.9% (10)	0% (0)	7.7% (1)	15.4% (2)	3.259	.294
	67.1% (210)	13.7% (43)	12.5% (39)	6.7% (21)		
Skills	53.8% (7)	0% (0)	30.8% (4)	15.4% (2)	4.000	.222
	43.5% (136)	18.2% (57)	30.7% (96)	7.7% (24)		
Obligation	0% (0)	69.2% (9)	7.7% (1)	23.1% (3)	12.513	.002*
	30.4% (95)	35.8% (112)	25.6% (80)	8.3% (26)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 7.373$; $p = .005$*					
Intrinsic-Could be Either	$\chi^2 = 1.180$; $p = .460$					
Intrinsic-Neither	$\chi^2 = 10.071$; $p = .012$					
Extrinsic-Could be Either	$\chi^2 = 3.968$; $p = .053$					
Extrinsic-Neither	$\chi^2 = 0.269$; $p = .702$					
Could be Either-Neither	$\chi^2 = 5.058$; $p = .055$					
Ideal	7.7% (1)	0% (0)	92.3% (12)	0% (0)	13.964	.001*
	33.2% (104)	24.0% (75)	36.1% (113)	6.7% (21)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.718$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 8.002$; $p = .004$*					
Intrinsic-Neither	$\chi^2 = 0.202$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 7.660$; $p = .004$*					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 2.197$; $p = .216$					
Lean	0% (0)	38.5% (5)	38.5% (5)	23.1% (3)	8.493	.028*

	29.7% (93)	33.5% (105)	28.4% (89)	8.3% (26)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.334$; $p = .064$					
Intrinsic-Could be Either	$\chi^2 = 5.083$; $p = .059$					
Intrinsic-Neither	$\chi^2 = 9.863$; $p = .012$					
Extrinsic-Could be Either	$\chi^2 = 0.065$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 1.423$; $p = .363$					
Could be Either-Neither	$\chi^2 = 0.921$; $p = .391$					
Passion	53.8% (7)	0% (0)	46.2% (6)	0% (0)	7.232	.041*
	57.8% (181)	18.5% (58)	16.9% (53)	6.7% (21)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 2.223$; $p = .204$					
Intrinsic-Could be Either	$\chi^2 = 3.742$; $p = .087$					
Intrinsic-Neither	$\chi^2 = 0.809$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 6.217$; $p = .027$					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 2.309$; $p = .332$					
Challenge	46.2% (6)	0% (0)	53.8% (7)	0% (0)	5.339	.116
	30.7% (96)	22.0% (69)	38.7% (121)	8.6% (27)		
Independence	61.5% (8)	0% (0)	23.1% (3)	15.4% (2)	5.022	.129
	58.5% (183)	18.2% (57)	17.9% (56)	5.4% (17)		
Approval	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	7.341	.039*
	20.8% (65)	50.5% (158)	22.0% (69)	6.7% (21)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.835$; $p = .040$					
Intrinsic-Could be Either	$\chi^2 = 0.116$; $p = 1.000$					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 3.068$; $p = .116$					
Extrinsic-Neither	$\chi^2 = 1.582$; $p = .368$					
Could be Either-Neither	$\chi^2 = 0.303$; $p = 1.000$					
Mobility	30.8% (4)	15.4% (2)	23.1% (3)	30.8% (4)	4.034	.226
	37.7% (118)	26.5% (83)	24.6% (77)	11.2% (35)		
Friends	46.2% (6)	7.7% (1)	46.2% (6)	0% (0)	7.378	.049*

	28.4% (89)	40.9% (128)	25.9% (81)	4.8% (15)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 5.548$; $p = .044$				
Intrinsic-Could be Either		$\chi^2 = 0.025$; $p = 1.000$				
Intrinsic-Neither		$\chi^2 = 1.0002$; $p = 1.000$				
Extrinsic-Could be Either		$\chi^2 = 6.209$; $p = .018$				
Extrinsic-Neither		$\chi^2 = 0.117$; $p = 1.000$				
Could be Either-Neither		$\chi^2 = 1.099$; $p = .588$				
Flexible	15.4% (2)	7.7% (1)	23.1% (3)	53.8% (7)	18.106	.000*
	41.0% (128)	23.1% (72)	28.2% (88)	7.7% (24)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 4.334$; $p = .064$				
Intrinsic-Could be Either		$\chi^2 = 5.083$; $p = .059$				
Intrinsic-Neither		$\chi^2 = 9.863$; $p = .012$				
Extrinsic-Could be Either		$\chi^2 = 0.065$; $p = 1.000$				
Extrinsic-Neither		$\chi^2 = 1.423$; $p = .363$				
Could be Either-Neither		$\chi^2 = 11.427$; $p = .003$*				
Beneficial	38.5% (5)	0% (0)	53.8% (7)	7.7% (1)	4.701	.159
	32.9% (103)	22.4% (70)	34.5% (108)	10.2% (32)		
Coordination	23.1% (3)	0% (0)	46.2% (6)	30.8% (4)	13.834	.001*
	37.7% (118)	30.7% (96)	24.3% (76)	7.3% (23)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic		$\chi^2 = 2.414$; $p = .257$				
Intrinsic-Could be Either		$\chi^2 = 2.700$; $p = .162$				
Intrinsic-Neither		$\chi^2 = 7.454$; $p = .021$				
Extrinsic-Could be Either		$\chi^2 = 7.269$; $p = .009$*				
Extrinsic-Neither		$\chi^2 = 14.700$; $p = .002$*				
Could be Either-Neither		$\chi^2 = 1.370$; $p = .260$				
Value	61.5% (8)	0% (0)	38.5% (5)	0% (0)	4.200	.209
	41.9% (131)	21.1% (66)	32.6% (102)	4.5% (14)		
Personal Best	61.5% (8)	0% (0)	38.5% (5)	0% (0)	6.075	.073
	57.2% (179)	20.4% (64)	16.3% (51)	6.1% (19)		
Belonging	76.9% (10)	0% (0)	23.1% (3)	0% (0)	13.267	.002*

	30.7% (96)	37.4% (117)	24.0% (75)	8.0% (25)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 11.556$; $p < .001$*					
Intrinsic-Could be Either	$\chi^2 = 2.137$; $p = .243$					
Intrinsic-Neither	$\chi^2 = 2.553$; $p = .207$					
Extrinsic-Could be Either	$\chi^2 = 4.570$; $p = .063$					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 0.990$; $p = 1.000$					
Muscle	7.7% (1)	15.4% (2)	53.8% (7)	23.1% (3)	9.807	.012*
	33.9% (106)	32.3% (101)	24.9% (78)	8.9% (28)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.378$; $p = .616$					
Intrinsic-Could be Either	$\chi^2 = 6.323$; $p = .023$					
Intrinsic-Neither	$\chi^2 = 6.528$; $p = .035$					
Extrinsic-Could be Either	$\chi^2 = 4.047$; $p = .081$					
Extrinsic-Neither	$\chi^2 = 3.970$; $p = .081$					
Could be Either-Neither	$\chi^2 = 0.060$; $p = .726$					
Goals	7.7% (1)	0% (0)	84.6% (11)	7.7% (1)	19.476	.000*
	50.5% (158)	18.2% (57)	25.2% (79)	6.1% (19)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.360$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 16.839$; $p < .001$*					
Intrinsic-Neither	$\chi^2 = 3.072$; $p = .212$					
Extrinsic-Could be Either	$\chi^2 = 7.530$; $p = .007$*					
Extrinsic-Neither	$\chi^2 = 2.887$; $p = .260$					
Could be Either-Neither	$\chi^2 = 0.878$; $p = .691$					
First	0% (0)	15.4% (2)	38.5% (5)	46.2% (6)	9.162	.014*
	24.9% (78)	31.6% (99)	21.4% (67)	22.0% (69)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 1.562$; $p = .505$					
Intrinsic-Could be Either	$\chi^2 = 5.603$; $p = .024$					
Intrinsic-Neither	$\chi^2 = 6.495$; $p = .012$					
Extrinsic-Could be Either	$\chi^2 = 2.668$; $p = .129$					

Extrinsic-Neither	$\chi^2 = 3.595$; $p = .074$					
Could be Either-Neither	$\chi^2 = 0.059$; $p = 1.000$					
Recognition	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	6.056	.078
	17.9% (56)	53.7% (168)	21.1% (66)	7.3% (23)		
Influencer	0% (0)	61.5% (8)	38.5% (5)	0% (0)	3.430	.271
	16.0% (50)	53.4% (167)	23.6% (74)	7.0% (22)		
Physical Health	53.8% (7)	15.4% (2)	30.8% (4)	0% (0)	.308	1.0000
	52.7% (165)	15.0% (47)	27.2% (85)	5.1% (16)		
Awards	0% (0)	100% (13)	0% (0)	0% (0)	7.762	.030*
	15.3% (48)	57.8% (181)	21.7% (68)	5.1% (16)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.059$; $p = 1.000$					
Intrinsic-Could be Either						
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 4.795$; $p = .024$					
Extrinsic-Neither	$\chi^2 = 1.143$; $p = .605$					
Could be Either-Neither						
Unpleasant	7.7% (1)	23.1% (3)	23.1% (3)	46.2% (6)	6.934	.052
	31.9% (100)	17.9% (56)	31.3% (98)	18.8% (59)		
Community	84.6% (11)	15.4% (2)	0% (0)	0% (0)	18.312	.000*
	23.6% (74)	46.6% (146)	24.0% (75)	5.8% (18)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 13.767$; $p < .001$*					
Intrinsic-Could be Either	$\chi^2 = 10.422$; $p = .001$*					
Intrinsic-Neither	$\chi^2 = 2.608$; $p = .205$					
Extrinsic-Could be Either	$\chi^2 = 1.023$; $p = .552$					
Extrinsic-Neither	$\chi^2 = 0.246$; $p = 1.000$					
Could be Either-Neither						
Dedication	76.9% (10)	15.4% (2)	0% (0)	7.7% (1)	3.604	.241
	54.0% (169)	16.6% (52)	23.3% (73)	6.1% (19)		
Mental Health	69.2% (9)	0% (0)	23.1% (3)	7.7% (1)	2.332	.465
	61.7% (193)	13.4% (42)	20.1% (63)	4.8% (15)		
Shame	0% (0)	84.6% (11)	0% (0)	15.4% (2)	22.734	.000*

	35.8% (112)	24.0% (75)	28.4% (89)	11.8% (37)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 15.168$; $p < .001$*					
Intrinsic-Could be Either						
Intrinsic-Neither	$\chi^2 = 5.821$; $p = .065$					
Extrinsic-Could be Either	$\chi^2 = 12.147$; $p < .001$*					
Extrinsic-Neither	$\chi^2 = 1.691$; $p = .342$					
Could be Either-Neither	$\chi^2 = 4.637$; $p = .091$					
Technique	38.5% (5)	0% (0)	38.5% (5)	23.1% (3)	6.566	.064
	40.9% (128)	24.0% (75)	24.6% (77)	10.5% (33)		
Knowledge	61.5% (8)	0% (0)	30.8% (4)	7.7% (1)	3.799	.228
	55.3% (173)	17.9% (56)	22.7% (71)	4.2% (13)		
Pleasure	61.5% (8)	0% (0)	23.1% (3)	15.4% (2)	4.051	.201
	45.4% (142)	17.6% (55)	28.8% (90)	8.3% (26)		
Build Muscle	0% (0)	30.8% (4)	69.2% (9)	0% (0)	12.025	.003*
	33.5% (105)	33.5% (105)	26.5% (83)	6.4% (20)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 3.927$; $p = .122$					
Intrinsic-Could be Either	$\chi^2 = 10.763$; $p = .001$*					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 3.082$; $p = .091$					
Extrinsic-Neither	$\chi^2 = 0.757$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 2.127$; $p = .358$					
Muscular	0% (0)	30.8% (4)	61.5% (8)	7.7% (1)	10.865	.007*
	34.2% (107)	33.2% (104)	25.9% (81)	6.7% (21)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.038$; $p = .122$					
Intrinsic-Could be Either	$\chi^2 = 10.027$; $p = .002$*					
Intrinsic-Neither	$\chi^2 = 4.902$; $p = .171$					
Extrinsic-Could be Either	$\chi^2 = 2.382$; $p = .143$					
Extrinsic-Neither	$\chi^2 = 0.035$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 0.467$; $p = .685$					
Fun	76.9% (10)	0% (0)	23.1% (3)	0% (0)	7.549	.037*

	37.4% (117)	21.1% (66)	34.2% (107)	7.3% (23)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 5.481$; $p = .017$					
Intrinsic-Could be Either	$\chi^2 = 3.012$; $p = .094$					
Intrinsic-Neither	$\chi^2 = 1.940$; $p = .362$					
Extrinsic-Could be Either	$\chi^2 = 1.831$; $p = .293$					
Extrinsic-Neither						
Could be Either-Neither	$\chi^2 = 0.642$; $p = 1.000$					
Improvements	30.8% (4)	0% (0)	61.5% (8)	7.7% (1)	6.303	.070
	39.3% (123)	21.7% (68)	31.9% (100)	7.0% (22)		
Personal Value	69.2% (9)	0% (0)	30.8% (4)	0% (0)	3.368	.305
	62.3% (195)	15.7% (49)	16.9% (53)	5.1% (16)		
Role Model	30.8% (4)	15.4% (2)	46.2% (6)	7.7% (1)	4.098	.202
	27.8% (87)	39.3% (123)	26.8% (84)	6.1% (19)		
External	0% (0)	76.9% (10)	7.7% (1)	15.4% (2)	3.130	.292
	12.1% (38)	66.1% (207)	15.0% (47)	6.7% (21)		
Toned	0% (0)	38.5% (5)	53.8% (7)	7.7% (1)	8.120	.032*
	30.7% (96)	32.6% (102)	27.2% (85)	9.6% (30)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.599$; $p = .061$					
Intrinsic-Could be Either	$\chi^2 = 7.587$; $p = .006$*					
Intrinsic-Neither	$\chi^2 = 3.121$; $p = .244$					
Extrinsic-Could be Either	$\chi^2 = 0.752$; $p = .552$					
Extrinsic-Neither	$\chi^2 = 0.121$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 0.732$; $p = .678$					
Financial Success	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	13.123	.002*
	22.4% (70)	37.4% (117)	32.3% (101)	8.0% (25)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 6.929$; $p = .009$					
Intrinsic-Could be Either	$\chi^2 = 0.690$; $p = 1.000$					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 7.428$; $p = .008$*					
Extrinsic-Neither	$\chi^2 = 2.522$; $p = .217$					

Could be Either-Neither	$\chi^2 = 0.247$; $p = 1.000$					
Improved Form	23.1% (3)	7.7% (1)	69.2% (9)	0% (0)	8.969	.017*
	38.3% (120)	26.5% (83)	26.2% (82)	8.9% (28)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.411$; $p = .648$					
Intrinsic-Could be Either	$\chi^2 = 5.486$; $p = .032$					
Intrinsic-Neither	$\chi^2 = 0.697$; $p = 1.000$					
Extrinsic-Could be Either	$\chi^2 = 6.136$; $p = .019$					
Extrinsic-Neither	$\chi^2 = 0.336$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 2.996$; $p = .113$					
Perks	0% (0)	53.8% (7)	30.8% (4)	15.4% (2)	3.478	.294
	18.5% (58)	45.4% (142)	25.9% (81)	10.2% (32)		
Appearance	0% (0)	92.3 % (12)	7.7% (1)	0% (0)	7.805	.036*
	19.2% (60)	49.4% (154)	27.2% (85)	4.2% (13)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.581$; $p = .039$					
Intrinsic-Could be Either	$\chi^2 = 0.702$; $p = 1.000$					
Intrinsic-Neither						
Extrinsic-Could be Either	$\chi^2 = 4.261$; $p = .040$					
Extrinsic-Neither	$\chi^2 = 1.001$; $p = .605$					
Could be Either-Neither	$\chi^2 = 0.153$; $p = 1.000$					
Have to	0% (0)	69.2% (9)	15.4% (2)	15.4% (2)	7.937	.029*
	23.1% (72)	32.1% (100)	26.6% (83)	18.3% (57)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 6.256$; $p = .012$					
Intrinsic-Could be Either	$\chi^2 = 1.716$; $p = .500$					
Intrinsic-Neither	$\chi^2 = 2.479$; $p = .201$					
Extrinsic-Could be Either	$\chi^2 = 3.112$; $p = .117$					
Extrinsic-Neither	$\chi^2 = 1.482$; $p = .332$					
Could be Either-Neither	$\chi^2 = 0.139$; $p = 1.000$					

Strong	7.7% (1)	7.7% (1)	69.2% (9)	15.4% (2)	10.197	.010*
	39.1% (122)	21.2% (66)	33.0% (103)	6.7% (21)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.192$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 7.506$; $p = .008$*					
Intrinsic-Neither	$\chi^2 = 5.982$; $p = .065$					
Extrinsic-Could be Either	$\chi^2 = 3.403$; $p = .093$					
Extrinsic-Neither	$\chi^2 = 2.757$; $p = .159$					
Could be Either-Neither	$\chi^2 = 0.011$; $p = 1.000$					
Idealized	23.1% (3)	30.8% (4)	30.8% (4)	15.4% (2)	1.189	.804
	28.6% (89)	35.7% (111)	26.4% (82)	9.3% (29)		
Appealing	30.8% (4)	15.4% (2)	46.2% (6)	7.7% (1)	3.078	.357
	24.4% (76)	36.9% (115)	30.4% (95)	8.3% (26)		
Gain Weight	0% (0)	38.5% (5)	53.8% (7)	7.7% (1)	8.710	.021*
	31.4% (98)	35.3% (110)	25.6% (80)	7.7% (24)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.363$; $p = .064$					
Intrinsic-Could be Either	$\chi^2 = 8.195$; $p = .004$*					
Intrinsic-Neither	$\chi^2 = 3.952$; $p = .203$					
Extrinsic-Could be Either	$\chi^2 = 1.212$; $p = .369$					
Extrinsic-Neither	$\chi^2 = 0.006$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 0.479$; $p = .681$					
Energy	84.6% (11)	0% (0)	15.4% (2)	0% (0)	5.039	.137
	51.9% (162)	19.9% (62)	21.5% (67)	6.7% (21)		
Compete	0% (0)	23.1% (3)	69.2% (9)	7.7% (1)	10.091	.009*
	21.8% (68)	42.3% (132)	26.9% (84)	9.0% (28)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.534$; $p = .552$					
Intrinsic-Could be Either	$\chi^2 = 6.970$; $p = .011$					
Intrinsic-Neither	$\chi^2 = 2.369$; $p = .299$					
Extrinsic-Could be Either	$\chi^2 = 6.138$; $p = .017$					
Extrinsic-Neither	$\chi^2 = 0.151$; $p = .544$					
Could be Either-Neither	$\chi^2 = 1.140$; $p = .449$					

Personality	15.4% (2)	0% (0)	7.7% (1)	76.9% (10)	39.594	.000*
	55.1% (172)	19.2% (60)	20.5% (64)	5.1% (16)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 0.696$; $p = 1.000$					
Intrinsic-Could be Either	$\chi^2 = 0.058$; $p = 1.000$					
Intrinsic-Neither	$\chi^2 = 55.836$; $p < .001$*					
Extrinsic-Could be Either	$\chi^2 = 0.931$; $p = 1.000$					
Extrinsic-Neither	$\chi^2 = 26.113$; $p < .001$*					
Could be Either-Neither	$\chi^2 = 23.825$; $p < .001$*					
Relationships	46.2% (6)	7.7% (1)	38.5% (5)	7.7% (1)	6.150	.088
	32.8% (102)	37.9% (118)	24.4% (76)	4.8% (15)		
Growth	100% (13)	0% (0)	0% (0)	0% (0)	11.105	.005*
	49.7% (155)	20.2% (63)	23.7% (74)	6.4% (20)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 5.166$; $p = .022$					
Intrinsic-Could be Either	$\chi^2 = 6.051$; $p = .011$					
Intrinsic-Neither	$\chi^2 = 1.663$; $p = .367$					
Extrinsic-Could be Either						
Extrinsic-Neither						
Could be Either-Neither						
Worry	0% (0)	38.5% (5)	38.5% (5)	23.1% (3)	16.418	.000*
	50.6% (158)	16.3% (51)	22.1% (69)	10.9% (34)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 14.445$; $p = .001$*					
Intrinsic-Could be Either	$\chi^2 = 10.911$; $p = .003$*					
Intrinsic-Neither	$\chi^2 = 13.011$; $p = .006$*					
Extrinsic-Could be Either	$\chi^2 = 0.212$; $p = .745$					
Extrinsic-Neither	$\chi^2 = 0.019$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 0.067$; $p = 1.000$					
Pressured	0% (0)	76.9% (10)	7.7% (1)	15.4% (2)	9.105	.015*
	24.0% (75)	42.3% (132)	25.6% (80)	8.0% (25)		
			Post-Hoc Analysis			

Intrinsic-Extrinsic	$\chi^2 = 5.537$; $p = .016$					
Intrinsic-Could be Either	$\chi^2 = 0.932$; $p = 1.000$					
Intrinsic-Neither	$\chi^2 = 5.667$; $p = .068$					
Extrinsic-Could be Either	$\chi^2 = 3.710$; $p = .060$					
Extrinsic-Neither	$\chi^2 = 0.005$; $p = 1.000$					
Could be Either-Neither	$\chi^2 = 2.857$; $p = .154$					
Accountability**	0% (0)	0% (0)	100% (3)	0% (0)	4.796	.107
	35.3% (110)	27.9% (87)	27.9% (87)	9.0% (28)		

Note. Expert participants are labelled in grey (top) of each word's row. General population is in white.
* $p < .05$
** The word accountability was only evaluated by 3 expert group participants because it was evaluated in the second round of surveying.

Table 6

Goal Content Chi-Square Test of Homogeneity

	Intrinsic	Extrinsic	Either Or	Neither Nor	Pearson Chi-Square	Exact Sig. (2-sided)
Self-Acceptance	65.2% (60)	16.3% (15)	15.2% (14)	3.3% (3)	3.61	.307
	75.3% (113)	10.7% (16)	10.0% (15)	4.0% (6)		
Peer Pressure	16.3% (15)	57.6% (53)	19.6% (18)	6.5% (6)	0.17	.982
	16.0% (24)	59.3% (89)	19.3% (29)	5.3% (8)		
Fitness	37.0% (34)	22.8% (21)	30.4% (28)	9.8% (9)	11.23	.011*
	48.7% (73)	18.7% (28)	31.3% (47)	1.3% (2)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 1.81$; $p = .179$					
Intrinsic-Could be Either	$\chi^2 = 0.61$; $p = .436$					
Intrinsic-Neither	$\chi^2 = 10.79$; $p = .001$*					
Extrinsic-Could be Either	$\chi^2 = 0.38$; $p = .538$					
Extrinsic-Neither	$\chi^2 = 5.46$; $p = .020$					
Could be Either-Neither	$\chi^2 = 7.75$; $p = .005$*					
Social Interaction	21.7% (20)	54.3% (50)	21.7% (20)	2.2% (2)	2.39	.496
	16.7% (25)	53.3% (80)	24.7% (37)	5.3% (8)		
Boredom	44.6% (41)	13.0% (12)	22.8% (21)	19.6% (18)	4.34	.227
	55.3% (83)	15.3% (23)	16.0% (24)	13.3% (20)		
Influence	13.0% (12)	54.3% (50)	26.1% (24)	6.5% (6)	2.79	.425
	18.0% (27)	57.3% (86)	21.3% (32)	3.3% (5)		
Self-Esteem	68.5% (63)	14.1% (13)	16.3% (15)	1.1% (1)	1.85	.603
	66.0% (99)	12.7% (19)	17.3% (26)	4.0% (6)		
Mastery	34.8% (32)	19.6% (18)	39.1% (36)	6.5% (6)	8.64	.035*
	52.0% (78)	13.3% (20)	26.0% (39)	8.7% (13)		
			Post-Hoc Analysis			
Intrinsic-Extrinsic	$\chi^2 = 4.22$; $p = .040$					
Intrinsic-Could be Either	$\chi^2 = 6.86$; $p = .009$					
Intrinsic-Neither	$\chi^2 = 0.05$; $p = .826$					

Extrinsic-Could be Either	$\chi^2 = 0.00$; $p = .949$					
Extrinsic-Neither	$\chi^2 = 130$; $p = .255$					
Could be Either-Neither	$\chi^2 = 1.65$; $p = .198$					
Satisfaction	53.3% (49)	17.4% (16)	25.0% (23)	4.3% (4)	2.23	.526
	49.3% (74)	16.7% (25)	32.0% (48)	2.0% (3)		
Weight	29.3% (27)	29.3% (27)	34.8% (32)	6.5% (6)	2.51	.473
	39.3% (59)	26.0% (39)	29.3% (44)	5.3% (8)		
Exciting	38.0% (35)	19.6% (18)	28.3% (26)	14.1% (13)	1.18	.759
	43.3% (65)	20.7% (21)	25.3% (38)	10.7% (16)		
Win	21.7% (20)	39.1% (36)	32.6% (30)	6.5% (6)	1.39	.709
	26.0% (39)	40.7% (61)	26.0% (39)	7.3% (11)		
Best	31.5% (29)	30.4% (28)	27.2% (25)	10.9% (10)	2.46	.483
	32.0% (48)	22.0% (33)	32.7% (49)	13.3% (20)		
Perform	22.8% (21)	39.1% (36)	32.6% (30)	5.4% (5)	6.04	.110
	31.3% (47)	28.0% (42)	29.3% (44)	11.3% (17)		
Fit	27.2% (25)	31.5% (29)	33.7% (31)	7.6% (7)	1.66	.646
	33.3% (50)	29.3% (44)	32.7% (49)	4.7% (7)		
Interests	62.0% (57)	16.3% (15)	16.3% (15)	5.4% (5)	1.26	.738
	65.3% (98)	11.3% (17)	18.0% (27)	5.3% (8)		
Self-Worth	66.3% (61)	15.2% (14)	14.1% (13)	4.3% (4)	3.38	.337
	66.0% (99)	10.0% (15)	21.3% (32)	2.7% (4)		
Appraisal	12.0% (11)	58.7% (54)	21.7% (20)	7.6% (7)	3.34	.342
	16.0% (24)	47.3% (71)	24.7% (37)	12.0% (18)		
Doctor's Orders	27.2% (25)	44.6% (41)	15.2% (14)	13.0% (12)	0.43	.935
	26.7% (40)	41.3% (62)	16.7% (25)	15.3% (23)		
Popularity	9.8% (9)	69.6% (64)	18.5% (17)	2.2% (2)	3.78	.287
	13.3% (20)	72.0% (108)	10.7% (16)	4.0% (6)		
Status	13.0% (12)	68.5% (63)	16.3% (15)	2.2% (2)	2.46	.483
	12.0% (18)	65.3% (98)	16.0% (24)	6.7% (10)		
Want	50.0% (46)	27.2% (25)	16.3% (15)	6.5% (6)	4.53	.209
	53.3% (80)	16.7% (25)	19.3% (29)	10.7% (16)		
Guilt	50.0% (46)	19.6% (18)	19.6% (18)	10.9% (10)	1.87	.600

	48.0% (72)	14.7% (22)	22.0% (33)	15.3% (23)		
Image	21.7% (20)	48.9% (45)	25.0% (23)	4.3% (4)	0.27	.966
	22.7% (34)	49.3% (74)	22.7% (34)	5.3% (8)		
Execution	23.9% (22)	27.2% (25)	35.9% (33)	13.0% (12)	5.07	.167
	33.3% (50)	23.3% (35)	25.3% (38)	18.0% (27)		
Ashamed	45.7% (41)	22.8% (21)	23.9% (22)	7.6% (7)	5.43	.143
	50.7% (76)	13.3% (20)	22.0% (33)	14.0% (21)		
Attention	27.2% (25)	50.0% (46)	18.5% (17)	4.3% (4)	6.17	.104
	34.0% (51)	34.0% (51)	26.0% (39)	6.0% (9)		
Strength	45.7% (42)	23.9% (22)	25.0% (23)	5.4% (5)	5.32	.150
	54.7% (82)	12.7% (19)	26.0% (39)	6.7% (10)		
Thin	28.3% (26)	40.2% (37)	27.2% (25)	4.3% (4)	0.98	.807
	27.3% (41)	37.3% (56)	28.0% (42)	7.3% (11)		
Should	32.6% (30)	20.7% (19)	27.2% (25)	19.6% (18)	0.54	.909
	34.0% (51)	18.7% (28)	24.7% (37)	22.7% (34)		
Reward	17.4% (16)	44.6% (41)	32.6% (30)	5.4% (5)	0.66	.883
	17.3% (26)	44.7% (67)	30.0% (45)	8.0% (12)		
Stamina	56.5% (52)	21.7% (20)	15.2% (14)	6.5% (6)	0.42	.937
	60.0% (90)	18.7% (28)	15.3% (23)	6.0% (9)		
Social Recognition	17.4% (16)	62.0% (57)	14.1% (13)	6.5% (6)	2.01	.570
	14.7% (22)	60.0% (90)	20.7% (31)	4.7% (7)		
Curiosity	62.0% (57)	17.4% (16)	16.3% (15)	4.3% (4)	3.97	.264
	64.0% (96)	9.3% (14)	20.0% (30)	6.7% (10)		
Fear	50.0% (46)	19.6% (18)	21.7% (20)	8.7% (8)	3.77	.288
	58.7% (88)	14.0% (21)	15.3% (23)	12.0% (18)		
Identity	41.3% (38)	31.5% (29)	22.8% (21)	4.3% (4)	6.07	.108
	52.0% (78)	20.7% (31)	18.7% (28)	8.7% (13)		
Take Control	46.7% (43)	17.4% (16)	30.4% (28)	5.4% (5)	1.51	.680
	54.7% (82)	14.7% (22)	26.7% (40)	4.0% (6)		
Self-Sufficient	58.7% (54)	16.3% (15)	18.5% (17)	6.5% (6)	6.12	.106
	73.3% (110)	9.3% (14)	14.0% (21)	3.3% (5)		
Lose Weight	30.4% (28)	30.4% (28)	34.8% (32)	4.3% (4)	0.33	.954

	30.7% (46)	30.0% (45)	33.3% (50)	6.0% (9)		
Attractive	10.9% (10)	48.9% (45)	34.8% (32)	5.4% (5)	4.00	.262
	20.7% (31)	44.0% (66)	31.3% (47)	4.0% (6)		
Physique	31.5% (29)	39.1% (36)	26.1% (24)	3.3% (3)	3.90	.272
	40.7% (61)	29.3% (44)	24.0% (36)	6.0% (9)		
Empowered	45.7% (42)	22.8% (21)	28.3% (26)	3.3% (3)	5.07	.167
	53.3% (80)	19.3% (29)	19.3% (29)	8.0% (12)		
Beliefs	62.0% (57)	13.0% (12)	18.5% (17)	6.5% (6)	2.24	.523
	66.7% (100)	7.3% (11)	20.0% (30)	6.0% (9)		
Physical Fitness	41.3% (38)	25.0% (23)	30.4% (28)	3.3% (3)	1.00	.801
	47.3% (71)	20.7% (31)	28.7% (43)	3.3% (5)		
Failure	39.1% (36)	15.2% (14)	34.8% (32)	10.9% (10)	2.82	.420
	29.3% (44)	20.7% (31)	37.3% (56)	12.7% (19)		
Purpose	59.8% (55)	13.0% (12)	21.7% (20)	5.4% (5)	0.31	.959
	58.0% (87)	15.3% (23)	22.0% (33)	4.7% (7)		
Important	29.3% (27)	17.4% (16)	37.0% (34)	16.3% (15)	3.17	.366
	40.0% (60)	12.7% (19)	34.0% (51)	13.3% (20)		
Functionality	40.2% (37)	20.7% (19)	26.1% (24)	13.0% (12)	0.11	.991
	42.0% (63)	20.0% (30)	26.0% (39)	12.0% (18)		
Connection	29.3% (27)	40.2% (37)	26.1% (24)	4.3% (4)	5.07	.167
	38.0% (57)	26.7% (40)	31.3% (47)	4.0% (6)		
Fame	9.8% (9)	71.7% (66)	15.2% (14)	3.3% (3)	4.51	.212
	10.7% (16)	64.7% (97)	14.0% (21)	10.7% (16)		
Psychological Health	65.2% (60)	14.1% (13)	17.4% (16)	3.3% (3)	4.76	.190
	74.0% (111)	10.0% (15)	10.0% (15)	6.0% (9)		
Encouraged	27.2% (25)	42.4% (39)	27.2% (25)	3.3% (3)	5.54	.136
	40.0% (60)	30.0% (45)	25.3% (38)	4.7% (7)		
Impress Others	15.2% (14)	60.9% (56)	20.7% (19)	3.3% (3)	5.04	.169
	17.3% (26)	62.7% (94)	12.0% (18)	8.0% (12)		
Better	30.4% (28)	22.8% (21)	34.8% (32)	12.0% (11)	1.85	.605
	29.3% (44)	18.7% (28)	34.0% (51)	18.0% (27)		
Enjoy	53.3% (49)	16.3% (15)	26.1% (24)	4.3% (4)	0.86	.836

	54.7% (82)	12.7% (19)	26.7% (40)	6.0% (9)		
Compare	15.2% (14)	41.3% (38)	29.3% (27)	14.1% (13)	2.60	.458
	14.0% (21)	51.3% (77)	22.0% (33)	12.7% (19)		
Cardio	43.5% (40)	20.7% (19)	20.7% (19)	15.2% (14)	0.40	.941
	40.7% (61)	22.0% (33)	23.3% (35)	14.0% (21)		
Physical Attractiveness	17.4% (16)	47.8% (44)	30.4% (28)	4.3% (4)	3.73	.292
	25.3% (38)	50.0% (75)	21.3% (32)	3.3% (5)		
Money	13.0% (12)	48.9% (45)	23.9% (22)	14.1% (13)	1.71	.635
	16.7% (25)	50.7% (76)	23.3% (35)	9.3% (14)		
Impression	14.1% (13)	59.8% (55)	21.7% (20)	4.3% (4)	2.89	.409
	18.7% (28)	49.3% (74)	24.7% (37)	7.3% (11)		
Health	57.6% (53)	18.5% (17)	16.3% (15)	7.6% (7)	8.39	.039*
	67.3% (101)	7.3% (11)	20.7% (31)	4.7% (7)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 6.92$; $p = .009$					
Intrinsic-Could be Either	$\chi^2 = 0.05$; $p = .820$					
Intrinsic-Neither	$\chi^2 = 1.36$; $p = .244$					
Extrinsic-Could be Either	$\chi^2 = 5.60$; $p = .018$					
Extrinsic-Neither	$\chi^2 = 0.44$; $p = .508$					
Could be Either-Neither	$\chi^2 = 1.40$; $p = .237$					
Internal	63.0% (58)	16.3% (15)	14.1% (13)	6.5% (6)	4.98	.174
	76.0% (114)	9.3% (14)	9.3% (14)	5.3% (8)		
Skills	38.0% (35)	23.9% (22)	31.5% (29)	6.5% (6)	3.71	.294
	46.7% (70)	14.7% (22)	31.3% (47)	7.3% (11)		
Obligation	21.7% (20)	43.5% (40)	28.3% (26)	6.5% (6)	7.07	.070
	34.0% (51)	34.0% (51)	20.7% (31)	11.3% (17)		
Ideal	27.2% (25)	23.9% (22)	44.6% (41)	4.3% (4)	6.14	.105
	38.7% (58)	18.7% (28)	34.0% (51)	8.7% (13)		
Lean	37.0% (34)	30.4% (28)	26.1% (24)	6.5% (6)	1.70	.638
	30.7% (46)	30.0% (45)	29.3% (44)	10.0% (15)		
Passion	63.0% (58)	18.5% (17)	12.0% (11)	6.5% (6)	1.12	.771
	67.3% (101)	14.7% (22)	13.3% (20)	4.7% (7)		

Challenge	29.3% (27)	19.6% (18)	41.3% (38)	9.8% (9)	0.90	.826
	34.7% (52)	20.0% (30)	36.7% (55)	8.7% (13)		
Independence	56.5% (52)	19.6% (18)	18.5% (17)	5.4% (5)	3.12	.373
	66.0% (99)	12.0% (18)	16.7% (25)	5.3% (8)		
Approval	16.3% (15)	54.3% (50)	22.8% (21)	6.5% (6)	1.65	.649
	22.7% (34)	52.7% (79)	19.3% (29)	5.3% (8)		
Mobility	46.7% (43)	21.7% (20)	19.6% (18)	12.0% (11)	2.88	.411
	36.7% (55)	26.0% (39)	26.0% (39)	11.3% (17)		
Friends	30.4% (28)	37.0% (34)	30.4% (28)	2.2% (2)	3.28	.351
	31.3% (47)	41.3% (62)	22.0% (33)	5.3% (8)		
Flexible	47.8% (44)	22.8% (21)	23.9% (22)	5.4% (5)	2.28	.516
	40.9% (61)	20.8% (31)	32.9% (49)	5.4% (8)		
Beneficial	28.3% (26)	28.3% (26)	32.6% (30)	10.9% (10)	6.87	.076
	36.0% (54)	15.3% (23)	40.0% (60)	8.7% (13)		
Coordination	39.1% (36)	31.5% (29)	19.6% (18)	9.8% (9)	2.44	.487
	40.7% (61)	25.3% (38)	26.7% (40)	7.3% (11)		
Value	39.1% (36)	27.2% (25)	31.5% (29)	2.2% (2)	8.46	.037*
	44.7% (67)	13.3% (20)	36.0% (54)	6.0% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 5.49$; $p = .019$					
Intrinsic-Could be Either	$\chi^2 = 0.00$; $p = .999$					
Intrinsic-Neither	$\chi^2 = 1.26$; $p = .262$					
Extrinsic-Could be Either	$\chi^2 = 5.09$; $p = .024$					
Extrinsic-Neither	$\chi^2 = 4.95$; $p = .026$					
Could be Either-Neither	$\chi^2 = 1.23$; $p = .267$					
Personal Best	58.7% (54)	18.5% (17)	17.4% (16)	5.4% (5)	2.67	.446
	68.0% (102)	13.3% (20)	12.7% (19)	6.0% (9)		
Belonging	28.3% (26)	45.7% (42)	20.7% (19)	8.9% (11)	1.08	.781
	31.3% (47)	39.3% (59)	22.0% (33)	7.3% (11)		
Muscle	40.2% (37)	28.3% (26)	23.9% (22)	7.6% (7)	0.96	.810
	35.3% (53)	29.3% (44)	24.7% (37)	10.7% (16)		
Goals	48.9% (45)	18.5% (17)	29.3% (27)	3.3% (3)	2.07	.558

	50.0% (75)	15.3% (23)	27.3% (41)	7.3% (11)		
First	19.6% (18)	34.8% (32)	26.1% (24)	19.6% (18)	6.07	.108
	26.0% (39)	25.3% (38)	19.3% (29)	29.3% (44)		
Recognition	17.4% (16)	53.3% (49)	23.9% (22)	5.4% (5)	1.41	.704
	14.0% (21)	57.3% (86)	20.7% (31)	8.0% (12)		
Influencer	12.0% (11)	59.8% (55)	21.7% (20)	6.5% (6)	0.53	.912
	13.3% (20)	58.0% (87)	20.0% (30)	8.7% (13)		
Physical Health	51.1% (47)	13.0% (12)	29.3% (27)	6.5% (6)	4.47	.215
	62.0% (93)	13.3% (20)	22.0% (33)	2.7% (4)		
Awards	14.1% (13)	58.7% (54)	22.8% (21)	4.3% (4)	0.38	.945
	12.0% (18)	62.0% (93)	21.3% (32)	4.7% (7)		
Unpleasant	34.8% (32)	20.7% (19)	25.0% (23)	19.6% (18)	2.98	.395
	28.7% (43)	16.0% (24)	34.0% (51)	21.3% (32)		
Community	22.8% (21)	50.0% (46)	21.7% (20)	5.4% (5)	0.10	.992
	23.3% (35)	49.3% (74)	22.7% (34)	4.7% (7)		
Dedication	54.3% (50)	21.7% (20)	20.7% (19)	3.3% (3)	5.67	.129
	60.7% (91)	11.3% (17)	21.3% (32)	6.7% (10)		
Mental Health	57.6% (53)	16.3% (15)	25.0% (23)	1.1% (1)	11.63	.009*
	71.3% (107)	8.7% (13)	14.0% (21)	6.0% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.32$; $p = .038$					
Intrinsic-Could be Either	$\chi^2 = 5.41$; $p = .020$					
Intrinsic-Neither	$\chi^2 = 2.32$; $p = .128$					
Extrinsic-Could be Either	$\chi^2 = 0.01$; $p = .914$					
Extrinsic-Neither	$\chi^2 = 5.74$; $p = .017$					
Could be Either-Neither	$\chi^2 = 5.90$; $p = .015$					
Shame	33.7% (31)	29.3% (27)	29.3% (27)	7.6% (7)	6.67	.083
	40.7% (61)	16.7% (25)	29.3% (44)	13.3% (20)		
Technique	42.4% (39)	25.0% (23)	23.9% (22)	8.7% (8)	2.80	.424
	44.0% (66)	17.3% (26)	25.3% (38)	13.3% (20)		
Knowledge	60.9% (56)	21.7% (20)	16.3% (15)	1.1% (1)	5.04	.169
	57.3% (86)	14.7% (22)	24.0% (36)	4.0% (6)		

Pleasure	48.9% (45)	17.4% (16)	26.1% (24)	7.6% (7)	1.15	.765
	52.0% (78)	14.0% (21)	28.7% (43)	5.3% (8)		
Build Muscle	35.9% (33)	28.3% (26)	28.3% (26)	7.6% (7)	0.90	.825
	39.3% (59)	30.0% (45)	25.3% (38)	5.3% (8)		
Muscular	39.1% (36)	28.3% (26)	26.1% (24)	6.5% (6)	0.77	.856
	34.0% (51)	31.3% (47)	26.7% (40)	8.0% (12)		
Fun	34.8% (32)	25.0% (23)	32.6% (30)	7.6% (7)	1.92	.589
	38.7% (58)	18.0% (27)	36.7% (55)	6.7% (10)		
Improvements	33.7% (31)	28.3% (26)	31.5% (29)	6.5% (6)	9.22	.026*
	49.3% (74)	14.0% (21)	30.7% (46)	6.0% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 9.22$; $p = .002$*					
Intrinsic-Could be Either	$\chi^2 = 1.65$; $p = .200$					
Intrinsic-Neither	$\chi^2 = 0.68$; $p = .411$					
Extrinsic-Could be Either	$\chi^2 = 3.24$; $p = .072$					
Extrinsic-Neither	$\chi^2 = 1.07$; $p = .301$					
Could be Either-Neither	$\chi^2 = .009$; $p = .923$					
Personal Value	66.3% (61)	20.7% (19)	13.0% (12)	0.0% (0)	8.09	.044*
	70.0% (105)	12.7% (19)	11.3% (17)	6.0% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 2.28$; $p = .131$					
Intrinsic-Could be Either	$\chi^2 = 0.23$; $p = .634$					
Intrinsic-Neither	$\chi^2 = 5.08$; $p = .024$					
Extrinsic-Could be Either	$\chi^2 = 0.49$; $p = .483$					
Extrinsic-Neither	$\chi^2 = 7.55$; $p = .006$*					
Could be Either-Neither	$\chi^2 = 5.44$; $p = .020$					
Role Model	18.5% (17)	53.3% (49)	26.1% (24)	2.2% (2)	8.31	.040*
	28.0% (42)	37.3% (56)	27.3% (41)	7.3% (11)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 5.01$; $p = .025$					
Intrinsic-Could be Either	$\chi^2 = 0.92$; $p = .338$					
Intrinsic-Neither	$\chi^2 = 0.99$; $p = .320$					
Extrinsic-Could be Either	$\chi^2 = 1.56$; $p = .212$					

Extrinsic-Neither	$\chi^2 = 4.61$; $p = .032$					
Could be Either-Neither	$\chi^2 = 2.26$; $p = .133$					
External	12.0% (11)	68.5% (63)	12.0% (11)	7.6% (7)	0.70	.874
	38.7% (13)	70.7% (106)	12.7% (19)	8.0% (12)		
Toned	28.3% (26)	35.9% (33)	29.3% (27)	6.5% (6)	3.82	.281
	34.0% (51)	27.3% (41)	26.7% (40)	12.0% (18)		
Financial Success	16.3% (15)	46.7% (43)	30.4% (28)	6.5% (6)	3.35	.340
	24.7% (37)	36.7% (55)	31.3% (47)	7.3% (11)		
Improved Form	35.9% (33)	31.5% (29)	27.2% (25)	5.4% (5)	5.20	.158
	42.7% (64)	20.7% (31)	26.0% (39)	10.7% (16)		
Perks	15.2% (14)	52.2% (48)	27.2% (25)	5.4% (5)	3.87	.276
	17.3% (26)	42.7% (64)	28.0% (42)	12.0% (18)		
Appearance	16.3% (15)	54.3% (50)	26.1% (24)	3.3% (3)	1.16	.764
	18.7% (28)	47.3% (71)	30.7% (46)	3.3% (5)		
Have to	15.2% (14)	39.1% (36)	31.5% (29)	14.1% (13)	12.15	.007*
	27.3% (41)	24.7% (37)	23.3% (35)	24.7% (37)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 7.50$; $p = .006$*					
Intrinsic-Could be Either	$\chi^2 = 5.05$; $p = .025$					
Intrinsic-Neither	$\chi^2 = 0.00$; $p = .949$					
Extrinsic-Could be Either	$\chi^2 = 0.22$; $p = .640$					
Extrinsic-Neither	$\chi^2 = 6.73$; $p = .009$					
Could be Either-Neither	$\chi^2 = 4.50$; $p = .034$					
Strong	33.7% (31)	19.6% (18)	40.2% (37)	6.5% (6)	4.96	.175
	48.0% (72)	14.0% (21)	32.0% (48)	6.0% (9)		
Idealized	25.0% (23)	45.7% (42)	23.9% (22)	5.4% (5)	3.63	.304
	28.9% (43)	35.6% (53)	24.8% (37)	10.7% (16)		
Appealing	23.9% (22)	38.0% (35)	26.1% (24)	12.0% (11)	6.69	.082
	26.0% (39)	35.3% (53)	34.7% (52)	4.0% (6)		
Gain Weight	31.5% (29)	29.3% (27)	31.5% (29)	7.6% (7)	2.96	.398
	37.3% (56)	30.7% (46)	22.0% (33)	10.0% (15)		
Energy	48.9% (45)	17.4% (16)	25.0% (23)	8.7% (8)	2.86	.414

	59.3% (89)	14.0% (21)	21.3% (32)	5.3% (8)		
Compete	17.4% (16)	42.4% (39)	31.5% (29)	8.7% (8)	0.96	.811
	21.3% (32)	44.0% (66)	27.3% (41)	7.3% (11)		
Personality	55.4% (51)	18.5% (17)	21.7% (20)	4.3% (4)	2.99	.394
	65.3% (98)	12.0% (18)	18.0% (27)	4.7% (7)		
Relationships	32.6% (30)	39.1% (36)	25.0% (23)	3.3% (3)	0.50	.919
	36.2% (54)	34.9% (52)	25.5% (38)	3.4% (5)		
Growth	54.3% (50)	16.3% (15)	22.8% (21)	6.5% (6)	0.87	.832
	56.0% (84)	15.3% (23)	24.7% (37)	4.0% (6)		
Worry	45.7% (42)	18.5% (17)	21.7% (20)	14.1% (13)	5.29	.151
	59.3% (89)	12.0% (18)	20.0% (30)	8.7% (13)		
Pressured	22.8% (21)	44.6% (41)	28.3% (26)	4.3% (4)	3.13	.373
	22.7% (34)	42.0% (63)	24.7% (37)	10.7% (16)		
Accountability	33.7% (31)	29.3% (27)	28.3% (26)	8.7% (8)	0.46	.929
	35.3% (53)	28.0% (42)	30.0% (45)	6.7% (10)		

Note. Extrinsically orientated participants are labelled in grey (top) of each word's row. Intrinsically oriented participants are in white (bottom).

* $p < .05$

Table 7

Gender Comparisons Chi-Square and Post-Hoc Analysis

	Intrinsic	Extrinsic	Either Or	Neither Nor	Pearson Chi-Square	Exact Sig. (2-sided)
Self-Acceptance	54.1% (66)	17.2% (21)	18.9% (23)	9.8% (12)	17.289	.001*
	73.1% (136)	11.3% (21)	14.0% (26)	1.6% (3)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.55$; $p = .033$					
Intrinsic-Could be Either	$\chi^2 = 3.51$; $p = .061$					
Intrinsic-Neither	$\chi^2 = 13.58$; $p < .001$*					
Extrinsic-Could be Either	$\chi^2 = 0.09$; $p = .771$					
Extrinsic-Neither	$\chi^2 = 4.08$; $p = .043$					
Could be Either-Neither	$\chi^2 = 5.07$; $p = .024$					
Peer Pressure	24.6% (30)	47.5% (58)	17.2% (21)	10.7% (13)	5.201	.158
	17.7% (33)	56.5% (105)	19.9% (37)	5.9% (11)		
Fitness	42.6% (52)	20.5% (25)	29.5% (36)	7.4% (9)	0.872	.832
	43.5% (81)	21.5% (40)	30.1% (56)	4.8% (9)		
Social Interaction	23.8% (29)	51.6% (63)	15.6% (19)	9.0% (11)	9.388	.025*
	17.7% (33)	53.2% (99)	25.8% (48)	3.2% (6)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.15$; $p = .283$					
Intrinsic-Could be Either	$\chi^2 = 4.67$; $p = .031$					
Intrinsic-Neither	$\chi^2 = 1.72$; $p = .190$					
Extrinsic-Could be Either	$\chi^2 = 2.29$; $p = .130$					
Extrinsic-Neither	$\chi^2 = 4.23$; $p = .040$					
Could be Either-Neither	$\chi^2 = 7.80$; $p = .005$					
Boredom	41.0% (50)	23.8% (29)	18.9% (23)	16.4% (20)	5.885	.117
	52.7% (98)	15.6% (29)	19.9% (37)	11.8% (22)		
Influence	23.0% (28)	47.5% (58)	21.1% (26)	8.2% (10)	7.301	.063
	19.4% (36)	54.3% (101)	25.6% (45)	2.2% (4)		
Self-Esteem	59.0% (72)	15.6% (19)	22.1% (27)	3.3% (4)	1.531	.675

	65.1% (121)	11.8% (22)	19.4% (36)	3.8% (7)		
Mastery	36.9% (45)	18.9% (23)	31.1% (38)	13.1% (16)	6.304	.098
	48.4% (90)	18.3% (34)	26.9% (50)	6.5% (12)		
Satisfaction	43.4% (53)	22.1% (27)	30.3% (37)	4.1% (5)	5.852	.119
	56.5% (105)	14.0% (26)	26.7% (49)	3.2% (6)		
Weight	36.1% (44)	34.4% (42)	23.0% (28)	6.6% (8)	5.557	.135
	31.2% (58)	28.5% (53)	35.5% (66)	4.8% (9)		
Exciting	39.3% (48)	27.0% (33)	24.6% (30)	9.0% (11)	5.631	.131
	40.9% (76)	16.7% (31)	29.0% (54)	13.4% (25)		
Win	32.0% (39)	34.4% (42)	25.4% (31)	8.2% (10)	3.395	.335
	22.6% (42)	40.3% (75)	28.0% (52)	9.1% (17)		
Best	33.6% (41)	26.2% (32)	27.9% (34)	12.3% (15)	.458	.928
	33.3% (62)	24.2% (45)	31.2% (58)	11.3% (21)		
Perform	30.1% (37)	26.0% (32)	32.5% (40)	11.4% (14)	4.048	.256
	29.2% (54)	34.6% (64)	29.7% (55)	6.5% (12)		
Fit	39.8% (49)	33.3% (41)	21.1% (26)	5.7% (7)	11.236	.011*
	26.5% (49)	29.2% (54)	37.8% (70)	6.5% (12)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.91$; $p = .341$					
Intrinsic-Could be Either	$\chi^2 = 10.74$; $p = .001$					
Intrinsic-Neither	$\chi^2 = 1.10$; $p = .293$					
Extrinsic-Could be Either	$\chi^2 = 5.42$; $p = .020$					
Extrinsic-Neither	$\chi^2 = 0.26$; $p = .611$					
Could be Either-Neither	$\chi^2 = 0.74$; $p = .390$					
Interests	57.7% (71)	15.4% (19)	17.9% (22)	8.9% (11)	5.873	.118
	61.1% (113)	17.3% (32)	18.9% (35)	2.7% (5)		
Self-Worth	48.0% (59)	22.8% (28)	20.3% (25)	8.9% (11)	18.019	.000*
	69.7% (129)	9.7% (18)	16.8% (31)	3.8% (7)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 13.76$; $p < .001$*					
Intrinsic-Could be Either	$\chi^2 = 3.36$; $p = .067$					
Intrinsic-Neither	$\chi^2 = 6.47$; $p = .011$					
Extrinsic-Could be Either	$\chi^2 = 2.66$; $p = .103$					

Extrinsic-Neither	$\chi^2 = 0.00$; $p = .986$					
Could be Either-Neither	$\chi^2 = 1.48$; $p = .224$					
Appraisal	18.7% (23)	40.7% (50)	27.6% (34)	13.0% (16)	3.687	.297
	15.1% (28)	51.4% (95)	24.3% (45)	9.2% (17)		
Doctor's Orders	30.9% (38)	33.3% (41)	21.1% (26)	14.6% (18)	7.371	.061
	25.4% (47)	48.1% (89)	13.5% (25)	13.0% (24)		
Popularity	16.3% (20)	61.8% (76)	17.9% (22)	4.1% (5)	1.269	.737
	15.7% (29)	67.0% (124)	13.5% (25)	3.8% (7)		
Status	20.3% (25)	56.1% (69)	19.5% (24)	4.1% (5)	3.443	.328
	14.1% (26)	61.6% (114)	17.3% (32)	7.0% (13)		
Want	46.3% (57)	22.8% (28)	18.7% (23)	12.2% (15)	1.191	.755
	51.4% (95)	20.5% (38)	18.9% (35)	9.2% (17)		
Guilt	39.8% (49)	26.8% (33)	20.3% (25)	13.0% (16)	2.778	.427
	45.4% (84)	18.9% (35)	21.1% (39)	14.6% (27)		
Image	26.0% (32)	45.5% (56)	23.6% (29)	4.9% (6)	.192	.979
	25.9% (48)	47.6% (88)	21.6% (40)	4.9% (9)		
Execution	37.4% (46)	22.0% (27)	29.3% (36)	11.4% (14)	5.707	.127
	27.0% (50)	27.0% (50)	27.6% (51)	18.4% (34)		
Ashamed	37.4% (46)	27.6% (34)	22.8% (28)	12.2% (15)	7.143	.067
	48.6% (90)	16.2% (30)	24.9% (46)	10.3% (19)		
Attention	35.0% (43)	30.1% (37)	23.6% (29)	11.4% (14)	10.083	.018*
	33.5% (62)	41.1% (76)	22.2% (41)	3.2% (6)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.58$; $p = .209$					
Intrinsic-Could be Either	$\chi^2 = 0.00$; $p = .950$					
Intrinsic-Neither	$\chi^2 = 5.71$; $p = .017$					
Extrinsic-Could be Either	$\chi^2 = 1.41$; $p = .234$					
Extrinsic-Neither	$\chi^2 = 9.98$; $p = .002$*					
Could be Either-Neither	$\chi^2 = 5.09$; $p = .024$					
Strength	38.2% (47)	26.0% (32)	25.2% (31)	10.6% (13)	6.931	.074
	50.8% (94)	17.8% (33)	25.4% (47)	5.9% (11)		
Thin	32.5% (40)	38.2% (47)	22.0% (27)	7.3% (9)	4.392	.222

	24.3% (45)	39.5% (73)	30.8% (57)	5.4% (10)		
Should	36.6% (45)	17.9% (22)	26.0% (32)	19.5% (24)	2.719	.437
	29.7% (55)	24.9% (46)	26.5% (49)	18.9% (35)		
Reward	26.0% (32)	38.2% (47)	25.2% (31)	10.6% (13)	5.934	.115
	17.3% (32)	46.5% (86)	29.7% (555)	6.5% (12)		
Stamina	48.0% (59)	22.8% (28)	20.3% (25)	8.9% (11)	5.032	.170
	58.9% (109)	18.4% (34)	18.4% (34)	4.3% (8)		
Social Recognition	23.6% (29)	48.8% (60)	16.3% (20)	11.4% (14)	7.252	.064
	17.8% (33)	60.5% (112)	16.8% (31)	4.9% (9)		
Curiosity	50.4% (62)	18.7% (23)	24.4% (30)	6.5% (8)	6.639	.084
	64.3% (119)	13.5% (25)	15.7% (29)	6.5% (12)		
Fear	44.7% (55)	21.1% (26)	22.0% (27)	12.2% (15)	3.325	.344
	54.6% (101)	15.1% (28)	18.9% (35)	11.4% (21)		
Identity	37.4% (46)	29.3% (36)	24.4% (30)	8.9% (11)	5.493	.139
	50.8% (94)	24.3% (45)	18.4% (34)	6.5% (12)		
Take Control	41.5% (51)	25.2% (31)	27.6% (34)	5.7% (7)	4.732	.193
	53.5% (99)	17.8% (33)	24.3% (45)	4.3% (8)		
Self-Sufficient	59.3% (73)	16.3% (20)	14.6% (18)	9.8% (12)	5.139	.162
	65.9% (122)	14.1% (26)	16.2% (30)	3.8% (7)		
Lose Weight	28.5% (35)	36.6% (45)	26.0% (32)	8.9% (11)	7.531	.057
	29.7% (55)	29.2% (54)	37.3% (69)	3.8% (7)		
Attractive	19.5% (24)	45.5% (56)	27.6% (34)	7.3% (9)	6.189	.103
	18.8% (35)	43.5% (81)	35.5% (66)	2.2% (4)		
Physique	30.1% (37)	33.3% (41)	28.5% (35)	8.1% (10)	4.208	.240
	37.6% (70)	35.5% (66)	22.6% (42)	4.3% (8)		
Empowered	48.0% (59)	21.1% (26)	21.1% (26)	9.8% (12)	1.913	.591
	47.3% (88)	22.0% (41)	24.7% (46)	5.9% (11)		
Beliefs	49.6% (61)	10.6% (13)	26.0% (32)	13.8% (17)	21.756	.000*
	68.8% (128)	11.3% (12)	17.7% (33)	2.2% (4)		

Post-Hoc Analysis

Intrinsic-Extrinsic $\chi^2 = 0.46$; $p = .497$

Intrinsic-Could be Either $\chi^2 = 5.99$; $p = .014$

Intrinsic-Neither	$\chi^2 = 19.18$; $p < .001$					
Extrinsic-Could be Either	$\chi^2 = 1.09$; $p = .297$					
Extrinsic-Neither	$\chi^2 = 9.55$; $p = .002$*					
Could be Either-Neither	$\chi^2 = 6.52$; $p = .011$					
Physical Fitness	43.1% (53)	28.5% (35)	23.6% (29)	4.9% (6)	6.520	.089
	40.9% (76)	23.1% (43)	34.4% (64)	1.6% (3)		
Failure	27.6% (34)	24.4% (30)	34.1% (42)	13.8% (17)	1.542	.673
	31.7% (59)	18.8% (35)	35.5% (66)	14.0% (26)		
Purpose	53.7% (66)	15.4% (19)	23.6% (29)	7.3% (9)	4.260	.235
	59.1% (110)	17.2% (32)	21.0% (39)	2.7% (5)		
Important	36.6% (45)	19.5% (24)	28.5% (35)	15.4% (19)	2.588	.460
	37.1% (69)	14.5% (27)	35.5% (66)	12.9% (24)		
Functionality	32.5% (40)	26.0% (32)	28.5% (35)	13.0% (16)	3.167	.367
	41.9% (78)	19.9% (37)	26.3% (49)	11.8% (22)		
Connection	33.3% (41)	39.0% (48)	19.5% (24)	8.1% (10)	9.471	.024*
	34.9% (35)	28.0% (52)	32.8% (61)	4.3% (8)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.82$; $p = .177$					
Intrinsic-Could be Either	$\chi^2 = 2.29$; $p = .130$					
Intrinsic-Neither	$\chi^2 = 1.81$; $p = .179$					
Extrinsic-Could be Either	$\chi^2 = 7.55$; $p = .006$*					
Extrinsic-Neither	$\chi^2 = 0.35$; $p = .555$					
Could be Either-Neither	$\chi^2 = 5.01$; $p = .025$					
Fame	15.4% (19)	58.5% (72)	17.1% (21)	8.9% (11)	.917	.821
	12.4% (23)	63.4% (118)	15.6% (29)	8.6% (16)		
Psychological Health	58.5% (72)	17.9% (22)	14.6% (18)	8.9% (11)	8.696	.034
	69.4% (129)	10.8% (20)	16.7% (31)	3.2% (6)		
Encouraged	32.5% (40)	35.8% (44)	26.0% (32)	5.7% (7)	2.038	.565
	40.3% (75)	31.7% (59)	23.7% (44)	4.3% (8)		
Impress Others	16.3% (20)	56.1% (69)	16.3% (20)	11.4% (14)	2.054	.561
	16.1% (30)	57.5% (107)	19.4% (36)	7.0% (13)		
Better	31.7% (39)	19.5% (24)	34.1% (42)	14.6% (18)	2.310	.511

	30.1% (56)	26.9% (50)	29.6% (55)	13.4% (25)		
Enjoy	42.3% (52)	21.1% (26)	26.8% (33)	9.8% (12)	5.386	.146
	54.3% (101)	16.1% (30)	24.2% (45)	5.4% (10)		
Compare	19.5% (24)	42.3% (52)	23.6% (29)	14.6% (18)	4.332	.228
	13.4% (25)	53.8% (100)	20.4% (38)	12.4% (23)		
Cardio	39.0% (48)	30.1% (37)	22.0% (27)	8.9% (11)	3.049	.384
	39.2% (73)	23.1% (43)	23.7% (44)	14.0% (26)		
Physical	22.8% (28)	45.5% (56)	23.6% (29)	8.1% (10)	3.092	.378
Attractiveness	21.5% (40)	47.3% (88)	27.4% (51)	3.8% (7)		
Money	20.3% (25)	40.7% (50)	22.8% (28)	16.3% (20)	9.086	.028*
	14.5% (27)	56.5% (105)	20.4% (38)	8.6% (16)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 5.01$; $p = .025$					
Intrinsic-Could be Either	$\chi^2 = 4.22$; $p = .040$					
Intrinsic-Neither	$\chi^2 = 0.38$; $p = .540$					
Extrinsic-Could be Either	$\chi^2 = 0.48$; $p = .490$					
Extrinsic-Neither	$\chi^2 = 6.83$; $p = .009$*					
Could be Either-Neither	$\chi^2 = 1.61$; $p = .204$					
Impression	17.9% (22)	50.4% (62)	25.2% (31)	6.5% (8)	.187	.980
	18.3% (34)	51.6% (96)	23.1% (43)	7.0% (13)		
Health	53.7% (66)	20.3% (25)	17.9% (22)	8.1% (10)	3.503	.320
	60.8% (113)	13.4% (25)	19.9% (37)	5.9% (11)		
Internal	61.0% (75)	17.9% (22)	15.4% (19)	5.7% (7)	5.907	.116
	72.0% (134)	11.3% (21)	9.7% (18)	7.0% (13)		
Skills	41.5% (51)	19.5% (24)	31.7% (39)	7.3% (9)	.614	.893
	45.2% (84)	17.2% (32)	29.6% (55)	8.1% (15)		
Obligation	34.1% (42)	39.0% (48)	16.3% (20)	10.6% (13)	10.454	.015*
	28.5% (53)	32.8% (61)	32.3% (60)	6.5% (12)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.00$; $p = .980$					
Intrinsic-Could be Either	$\chi^2 = 7.01$; $p = .008$*					
Intrinsic-Neither	$\chi^2 = .484$; $p = .487$					
Extrinsic-Could be Either	$\chi^2 = 7.26$; $p = .007$*					

Extrinsic-Neither	$\chi^2 = 0.52$; $p = .471$					
Could be Either-Neither	$\chi^2 = 6.44$; $p = .011$					
Ideal	36.6% (45)	23.6% (29)	32.5% (40)	7.3% (9)	1.529	.676
	31.7% (59)	23.7% (44)	38.7% (72)	5.9% (11)		
Lean	28.5% (35)	32.5% (40)	29.3% (36)	9.8% (12)	.751	.861
	31.2% (58)	33.9% (63)	27.4% (51)	7.5% (14)		
Passion	47.2% (58)	24.4% (30)	21.1% (26)	7.3% (9)	10.345	.016*
	65.1% (121)	14.5% (27)	14.0% (26)	6.5% (12)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 7.57$; $p = .006$*					
Intrinsic-Could be Either	$\chi^2 = 5.39$; $p = .020$					
Intrinsic-Neither	$\chi^2 = 0.92$; $p = .337$					
Extrinsic-Could be Either	$\chi^2 = 0.08$; $p = .784$					
Extrinsic-Neither	$\chi^2 = 0.59$; $p = .444$					
Could be Either-Neither	$\chi^2 = 0.031$; $p = .580$					
Challenge	31.7% (39)	17.1% (21)	40.7% (50)	10.6% (13)	3.657	.301
	30.6% (57)	25.3% (47)	37.1% (69)	7.0% (13)		
Independence	52.0% (64)	21.1% (26)	19.5% (24)	7.3% (9)	4.080	.253
	62.9% (117)	16.1% (30)	16.7% (31)	4.3% (8)		
Approval	23.6% (29)	47.2% (58)	20.3% (25)	8.9% (11)	2.644	.450
	19.4% (36)	52.2% (97)	23.1% (43)	5.4% (10)		
Mobility	39.0% (48)	28.5% (35)	19.5% (24)	13.0% (16)	2.455	.483
	37.1% (69)	25.8% (48)	26.9% (50)	10.2% (19)		
Friends	24.4% (30)	43.9% (54)	26.0% (32)	5.7% (7)	2.299	.513
	31.2% (58)	38.7% (72)	26.3% (49)	3.8% (7)		
Flexible	33.3% (41)	32.5% (40)	26.8% (33)	7.3% (9)	10.527	.015*
	46.5% (86)	17.3% (32)	28.1% (52)	8.1% (15)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 10.31$; $p = .001$					
Intrinsic-Could be Either	$\chi^2 = 0.96$; $p = .328$					
Intrinsic-Neither	$\chi^2 = 0.25$; $p = .618$					
Extrinsic-Could be Either	$\chi^2 = 4.39$; $p = .036$					
Extrinsic-Neither	$\chi^2 = 2.35$; $p = .125$					

Could be Either-Neither	$\chi^2 = 0.01$; $p = .906$					
Beneficial	30.1% (37)	29.3% (36)	27.6% (34)	13.0% (16)	8.281	.041*
	34.9% (65)	18.3% (34)	38.2% (71)	8.6% (16)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.90$; $p = .048$					
Intrinsic-Could be Either	$\chi^2 = 0.35$; $p = .555$					
Intrinsic-Neither	$\chi^2 = 1.92$; $p = .166$					
Extrinsic-Could be Either	$\chi^2 = 6.35$; $p = .012$					
Extrinsic-Neither	$\chi^2 = 0.02$; $p = .893$					
Could be Either-Neither	$\chi^2 = 3.29$; $p = .070$					
Coordination	32.5% (40)	33.3% (41)	23.6% (29)	10.6% (13)	4.834	.184
	41.4% (77)	28.5% (53)	24.7% (46)	5.4% (10)		
Value	38.2% (47)	23.6% (29)	31.7% (39)	6.5% (8)	3.056	.383
	44.1% (82)	19.4% (36)	33.3% (62)	3.2% (6)		
Personal Best	49.6% (61)	23.6% (29)	21.1% (26)	5.7% (7)	5.326	.149
	61.3% (114)	18.8% (35)	13.4% (25)	6.5% (12)		
Belonging	29.3% (36)	39.0% (48)	22.8% (28)	8.9% (11)	.925	.819
	32.3% (60)	34.9% (65)	25.3% (47)	7.5% (14)		
Muscle	29.3% (36)	33.3% (41)	24.4% (30)	13.0% (16)	4.711	.194
	36.6% (68)	32.3% (60)	24.7% (46)	6.5% (12)		
Goals	48.0% (59)	21.1% (26)	20.3% (25)	10.6% (13)	9.433	.024*
	53.2% (99)	16.1% (30)	27.4% (51)	3.2% (6)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 1.43$; $p = .232$					
Intrinsic-Could be Either	$\chi^2 = 0.44$; $p = .507$					
Intrinsic-Neither	$\chi^2 = 6.79$; $p = .009$					
Extrinsic-Could be Either	$\chi^2 = 2.49$; $p = .115$					
Extrinsic-Neither	$\chi^2 = 2.75$; $p = .097$					
Could be Either-Neither	$\chi^2 = 7.99$; $p = .005$*					
First	25.2% (31)	33.3% (41)	23.6% (29)	17.9% (22)	2.477	.479
	24.2% (45)	30.6% (57)	19.9% (37)	25.3% (47)		
Recognition	20.3% (25)	46.3% (57)	22.0% (27)	11.4% (14)	7.294	.063
	16.7% (31)	59.1% (110)	19.4% (36)	4.8% (9)		

Influencer	17.9% (22)	48.8% (60)	26.8% (33)	6.5% (8)	2.074	.557
	15.1% (28)	55.9% (104)	21.5% (40)	7.5% (14)		
Physical Health	48.0% (89)	19.5% (24)	24.4% (30)	8.1% (10)	7.276	.064
	55.9% (104)	12.4% (23)	28.5% (53)	3.2% (6)		
Awards	18.7% (23)	48.0% (59)	25.2% (31)	8.1% (10)	10.959	.012*
	13.4% (25)	65.1% (121)	18.8% (35)	2.7% (5)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.77$; $p = .052$					
Intrinsic-Could be Either	$\chi^2 = 0.01$; $p = .920$					
Intrinsic-Neither	$\chi^2 = 1.61$; $p = .204$					
Extrinsic-Could be Either	$\chi^2 = 4.19$; $p = .041$					
Extrinsic-Neither	$\chi^2 = 6.96$; $p = .008$					
Could be Either-Neither	$\chi^2 = 1.90$; $p = .168$					
Unpleasant	28.5% (35)	21.1% (26)	33.3% (41)	17.1% (21)	2.269	.519
	33.3% (62)	16.1% (30)	30.1% (56)	20.4% (38)		
Community	22.8% (28)	48.8% (60)	23.6% (29)	4.9% (6)	.581	.901
	24.7% (46)	44.6% (83)	24.7% (46)	5.9% (11)		
Dedication	42.3% (52)	19.5% (24)	28.5% (35)	9.8% (12)	13.608	.003*
	62.4% (116)	14.5% (27)	19.4% (36)	3.8% (7)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.48$; $p = .034$					
Intrinsic-Could be Either	$\chi^2 = 7.25$; $p = .007$					
Intrinsic-Neither	$\chi^2 = 7.87$; $p = .005$					
Extrinsic-Could be Either	$\chi^2 = 0.06$; $p = .807$					
Extrinsic-Neither	$\chi^2 = 1.44$; $p = .231$					
Could be Either-Neither	$\chi^2 = 1.15$; $p = .283$					
Mental Health	51.2% (63)	15.4% (19)	23.6% (29)	9.8% (12)	15.864	.001*
	68.8% (128)	12.4% (23)	17.2% (32)	1.6% (3)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 2.27$; $p = .132$					
Intrinsic-Could be Either	$\chi^2 = 4.23$; $p = .040$					
Intrinsic-Neither	$\chi^2 = 13.28$; $p < .001$*					
Extrinsic-Could be Either	$\chi^2 = 0.05$; $p = .818$					

Extrinsic-Neither	$\chi^2 = 5.38$; $p = .020$					
Could be Either-Neither	$\chi^2 = 5.11$; $p = .024$					
Shame	26.0% (32)	26.0% (32)	31.7% (39)	16.3% (20)	9.064	.028*
	41.4% (77)	22.6% (42)	26.9% (50)	9.1% (17)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 3.74$; $p = .053$					
Intrinsic-Could be Either	$\chi^2 = 4.46$; $p = .035$					
Intrinsic-Neither	$\chi^2 = 7.35$; $p = .007$ *					
Extrinsic-Could be Either	$\chi^2 = 0.01$; $p = .941$					
Extrinsic-Neither	$\chi^2 = 1.16$; $p = .282$					
Could be Either-Neither	$\chi^2 = 1.10$; $p = .294$					
Technique	37.4% (46)	25.2% (31)	29.3% (36)	8.1% (10)	4.161	.245
	43.5% (81)	23.1% (43)	21.0% (39)	12.4% (23)		
Knowledge	45.5% (56)	24.4% (30)	23.6% (29)	6.5% (8)	11.463	.009*
	62.4% (116)	13.4% (25)	21.5% (40)	2.7% (5)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 8.56$; $p = .003$*					
Intrinsic-Could be Either	$\chi^2 = 1.94$; $p = .164$					
Intrinsic-Neither	$\chi^2 = 4.49$; $p = .034$					
Extrinsic-Could be Either	$\chi^2 = 1.92$; $p = .166$					
Extrinsic-Neither	$\chi^2 = 0.21$; $p = .648$					
Could be Either-Neither	$\chi^2 = 1.68$; $p = .195$					
Pleasure	36.6% (45)	26.0% (32)	28.5% (35)	8.9% (11)	11.374	.010*
	51.1% (95)	12.4% (23)	29.0% (54)	7.5% (14)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 11.21$; $p = .001$*					
Intrinsic-Could be Either	$\chi^2 = 1.24$; $p = .266$					
Intrinsic-Neither	$\chi^2 = 1.33$; $p = .249$					
Extrinsic-Could be Either	$\chi^2 = 4.86$; $p = .028$					
Extrinsic-Neither	$\chi^2 = 1.39$; $p = .238$					
Could be Either-Neither	$\chi^2 = 0.18$; $p = .674$					
Build Muscle	32.5% (40)	35.0% (43)	23.6% (29)	8.9% (11)	2.567	.463
	33.9% (63)	33.3% (62)	28.0% (52)	4.8% (9)		

Muscular	31.7% (39)	33.3% (41)	25.2% (31)	9.8% (12)	3.142	.370
	36.0% (67)	32.3% (60)	26.9% (50)	4.8% (9)		
Fun	32.5% (40)	26.8% (33)	30.1% (37)	10.6% (13)	7.734	.052
	41.4% (77)	17.7% (33)	35.5% (66)	5.4% (10)		
Improvements	40.7% (50)	25.2% (31)	26.8% (33)	7.3% (9)	2.824	.420
	39.2% (73)	19.4% (36)	34.9% (65)	6.5% (12)		
Personal Value	52.0% (64)	20.3% (25)	18.7% (23)	8.9% (11)	12.596	.006*
	69.4% (129)	12.4% (23)	15.6% (29)	2.7% (5)		
			Post-Hoc Analysis			
	Intrinsic-Extrinsic	$\chi^2 = 5.91$; $p = .015$				
	Intrinsic-Could be Either	$\chi^2 = 2.19$; $p = .139$				
	Intrinsic-Neither	$\chi^2 = 8.13$; $p = .004$*				
	Extrinsic-Could be Either	$\chi^2 = 0.62$; $p = .432$				
	Extrinsic-Neither	$\chi^2 = 1.35$; $p = .244$				
	Could be Either-Neither	$\chi^2 = 2.94$; $p = .086$				
Role Model	29.3% (36)	39.0% (48)	25.2% (31)	6.5% (8)	.341	.952
	26.9% (50)	39.8% (74)	27.4% (51)	5.9% (11)		
External	13.0% (19)	65.0% (80)	17.9% (22)	4.1% (5)	2.905	.406
	11.8% (22)	66.7% (124)	13.4% (25)	8.1% (15)		
Toned	28.5% (35)	35.8% (44)	26.8% (33)	8.9% (11)	1.159	.763
	32.3% (60)	30.1% (56)	28.0% (52)	9.7% (18)		
Financial Success	25.2% (31)	34.1% (42)	31.7% (39)	8.9% (11)	1.397	.706
	21.0% (39)	39.8% (74)	31.7% (59)	7.5% (14)		
Improved Form	33.3% (41)	33.3% (41)	25.2% (31)	8.1% (10)	4.681	.197
	41.4% (77)	22.6% (42)	26.3% (49)	9.7% (18)		
Perks	22.8% (28)	39.8% (49)	27.6% (34)	9.8% (12)	3.728	.292
	15.6% (29)	48.9% (91)	24.7% (46)	10.8% (20)		
Appearance	18.7% (23)	49.6% (61)	26.0% (32)	5.7% (7)	1.879	.598
	20.0% (37)	49.2% (91)	28.1% (52)	2.7% (5)		
Have to	22.8% (28)	33.3% (41)	22.8% (28)	21.1% (26)	1.920	.589
	23.8% (44)	30.8% (57)	28.6% (53)	16.8% (31)		
Strong	36.6% (45)	22.8% (28)	30.9% (38)	9.8% (12)	3.462	.326

	40.5% (75)	20.0% (37)	34.6% (64)	4.9% (9)		
Idealized	30.1% (37)	29.3% (36)	30.9% (38)	9.8% (12)	3.287	.349
	28.3% (52)	38.6% (71)	23.9% (44)	9.2% (17)		
Appealing	23.6% (29)	32.5% (40)	30.1% (37)	13.8% (17)	8.091	.044*
	25.4% (47)	39.5% (73)	30.3% (56)	4.9% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.15$; $p = .699$					
Intrinsic-Could be Either	$\chi^2 = 0.05$; $p = .829$					
Intrinsic-Neither	$\chi^2 = 5.80$; $p = .016$					
Extrinsic-Could be Either	$\chi^2 = 0.42$; $p = .517$					
Extrinsic-Neither	$\chi^2 = 7.86$; $p = .005$*					
Could be Either-Neither	$\chi^2 = 5.37$; $p = .020$					
Gain Weight	29.3% (36)	34.1% (72)	26.0% (32)	10.6% (13)	3.140	.371
	33.0% (61)	36.8% (68)	24.9% (46)	5.4% (10)		
Energy	43.1% (53)	23.6% (29)	25.2% (31)	8.1% (10)	7.466	.058
	58.9% (109)	17.3% (32)	18.4% (34)	5.4% (10)		
Compete	27.6% (34)	35.8% (44)	22.8% (28)	13.8% (17)	11.068	.011*
	18.4% (34)	45.9% (85)	29.7% (55)	5.9% (11)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.70$; $p = .030$					
Intrinsic-Could be Either	$\chi^2 = 4.09$; $p = .043$					
Intrinsic-Neither	$\chi^2 = 0.91$; $p = .339$					
Extrinsic-Could be Either	$\chi^2 = 0.00$; $p = .955$					
Extrinsic-Neither	$\chi^2 = 6.86$; $p = .009$					
Could be Either-Neither	$\chi^2 = 6.32$; $p = .012$					
Personality	43.9% (54)	22.0% (27)	26.0% (32)	8.1% (10)	12.529	.006*
	63.2% (117)	16.8% (31)	16.8% (31)	3.2% (6)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 4.25$; $p = .039$					
Intrinsic-Could be Either	$\chi^2 = 7.31$; $p = .007$*					
Intrinsic-Neither	$\chi^2 = 6.21$; $p = .013$					
Extrinsic-Could be Either	$\chi^2 = 0.22$; $p = .641$					
Extrinsic-Neither	$\chi^2 = 1.28$; $p = .259$					

Could be Either-Neither	$\chi^2 = 0.70$; $p = .402$					
Relationships	27.9% (34)	36.1% (44)	28.7% (35)	7.4% (9)	5.672	.129
	35.7% (66)	39.5% (73)	21.6% (40)	3.2% (6)		
Growth	45.5% (56)	24.4% (30)	21.1% (26)	8.9% (11)	4.591	.204
	52.4% (97)	17.8% (33)	24.9% (46)	4.9% (9)		
Worry	41.5% (51)	16.3% (20)	26.8% (33)	15.4% (19)	9.110	.028*
	56.8% (105)	16.2% (30)	18.9% (35)	8.1% (15)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.90$; $p = .344$					
Intrinsic-Could be Either	$\chi^2 = 5.07$; $p = .024$					
Intrinsic-Neither	$\chi^2 = 6.45$; $p = .011$					
Extrinsic-Could be Either	$\chi^2 = 0.85$; $p = .357$					
Extrinsic-Neither	$\chi^2 = 2.05$; $p = .152$					
Could be Either-Neither	$\chi^2 = 0.49$; $p = .484$					
Pressured	26.0% (32)	41.5% (51)	19.5% (24)	13.0% (16)	9.407	.024*
	22.7% (42)	42.7% (79)	29.7% (55)	4.9% (9)		
Post-Hoc Analysis						
Intrinsic-Extrinsic	$\chi^2 = 0.32$; $p = .575$					
Intrinsic-Could be Either	$\chi^2 = 2.73$; $p = .099$					
Intrinsic-Neither	$\chi^2 = 3.22$; $p = .073$					
Extrinsic-Could be Either	$\chi^2 = 1.67$; $p = .196$					
Extrinsic-Neither	$\chi^2 = 5.24$; $p = .022$					
Could be Either-Neither	$\chi^2 = 9.07$; $p = .003$*					
Accountability**	32.5% (40)	32.5% (40)	23.6% (29)	11.4% (14)	4.765	.190
	37.8% (70)	24.3% (45)	30.3% (56)	7.6% (14)		

Note. Men are labelled in grey (top) of each word's row. Women are in white.

* $p < .05$

** The word accountability was only evaluated by 3 expert group participants because it was evaluated in the second round of surveying.

Table 8

Data Collection Modality

		Intrinsic	Extrinsic	Could be Either	Neither	Pearson Chi-Square	P Value
Self-Acceptance	Facebook	112 (57.4%)	26 (13.3%)	46 (23.6%)	10 (5.1%)	23.684	.000*
	Non-Facebook	92 (78.0%)	17 (14.4%)	4 (3.4%)	5 (4.2%)		
Peer Pressure	Facebook	51 (26.2%)	81 (41.5%)	47 (24.1%)	15 (7.7%)	29.757	.000*
	Non-Facebook	13 (11.0%)	85 (72.0%)	11 (9.3%)	9 (7.6%)		
Fitness	Facebook	80 (41.0%)	35 (17.9%)	69 (35.4%)	10 (5.1%)	8.071	.045*
	Non-Facebook	54 (45.8%)	31 (26.3%)	25 (21.2%)	8 (6.8%)		
Social Interaction	Facebook	43 (22.1%)	90 (46.2%)	50 (25.6%)	11 (5.6%)	8.225	.042*
	Non-Facebook	19 (16.1%)	74 (62.7%)	19 (16.1%)	6 (5.1%)		
Boredom	Facebook	91 (46.7%)	38 (19.5%)	47 (24.1%)	18 (9.2%)	11.984	.007*
	Non-Facebook	59 (50.0%)	20 (16.9%)	15 (12.7%)	24 (20.3%))		
Influence	Facebook	48 (24.6%)	89 (45.6%)	48 (24.6%)	9 (4.6%)	8.728	.033*
	Non-Facebook	16 (13.6%)	73 (61.9%)	24 (20.3%)	5 (4.2%)		
Self-Esteem	Facebook	112 (57.4%)	26 (13.3%)	49 (25.1%)	7 (3.6%)	8.644	.034*
	Non-Facebook	84 (71.2%)	16 (13.6%)	14 (11.9%)	4 (3.4%)		
Mastery	Facebook	80 (41.0%)	41 (21.0%)	54 (27.7%)	19 (9.7%)	3.651	.302
	Non-Facebook	56 (47.5%)	16 (13.6%)	37 (31.4%)	9 (7.6%)		
Satisfaction	Facebook	96 (49.2%)	32 (16.4%)	59 (30.3%)	7 (3.6%)	1.292	.731
	Non-Facebook	64 (54.2%)	21 (17.8%)	29 (24.6%)	4 (3.4%)		
Weight	Facebook	51 (26.2%)	66 (33.8%)	65 (33.3%)	12 (6.2%)	10.516	.015*
	Non-Facebook	52 (44.1%)	30 (25.4%)	30 (25.4%)	6 (5.1%)		
Exciting	Facebook	77 (39.5%)	41 (21.0%)	55 (28.2%)	21 (10.8%)	.599	.897
	Non-Facebook	47 (39.8%)	23 (19.5%)	32 (27.1%)	16 (13.6%)		
Win	Facebook	55 (28.2%)	68 (34.9%)	54 (27.7%)	17 (8.7%)	2.188	.534
	Non-Facebook	26 (22.0%)	50 (42.4%)	32 (27.1%)	10 (8.5%)		
Best	Facebook	65 (33.3%)	55 (28.2%)	59 (30.3%)	15 (7.7%)	8.353	.039*
	Non-Facebook	38 (32.2%)	24 (20.3%)	35 (29.7%)	21 (17.8%)		
Perform	Facebook	55 (28.2%)	65 (33.3%)	61 (31.3%)	13 (6.7%)	2.848	.416

	Non-Facebook	37 (31.4%)	32 (27.1%	36 (30.5%))	13 (11.0%)		
Fit	Facebook	54 (27.7%)	64 (32.8%)	64 (32.8%)	12 (6.2%)	3.911	.271
	Non-Facebook	45 (38.1%)	32 (27.1%)	33 (28.0%)	8 (6.8%)		
Interests	Facebook	110 (56.4%)	32 (16.4%)	42 (21.5%)	10 (5.1%)	3.402	.334
	Non-Facebook	76 (64.4%	19 (16.1%	16 (13.6%	7 (5.9%		
Self-worth	Facebook	105 (53.8%)	33 (16.9%)	41 (21.0%)	15 (7.7%)	10.864	.012*
	Non-Facebook	85 (72.0%	13 (11.0%	17 (14.4%	3 (2.5%		
Appraisal	Facebook	34 (17.4%)	89 (45.6%)	53 (27.2%)	18 (9.2%)	2.444	.486
	Non-Facebook	17 (14.4%	60 (50.8%	26 (22.0%	15 (12.7%		
Doctor's Orders	Facebook	57 (29.2%)	82 (42.1%)	34 (17.4%)	21 (10.8%)	3.194	.363
	Non-Facebook	30 (25.4%	48 (40.7%	19 (16.1%	21 (17.8%		
Popularity	Facebook	40 (20.5%)	110 (56.4%)	35 (17.9%)	9 (4.6%)	16.591	.001*
	Non-Facebook	9 (7.6%	93 (78.8%	13 (11.0%	3 (2.5%		
Status	Facebook	39 (20.0%)	100 (51.3%)	41 (21.0%)	14 (7.2%)	12.432	.006*
	Non-Facebook	12 (10.2%	84 (71.2%	18 (15.3%	4 (3.4%		
Want	Facebook	91 (46.7%)	43 (22.1%)	40 (20.5%)	20 (10.3%)	1.532	.675
	Non-Facebook	63 (53.4%	24 (20.3%	19 (16.1%	12 (10.2%		
Guilt	Facebook	62 (31.8%)	53 (27.2%)	49 (25.1%)	30 (15.4%)	27.486	.000*
	Non-Facebook	73 (61.9%	15 (12.7%	17 (14.4%	13 (11.0%		
Image	Facebook	56 (28.7%)	83 (42.6%)	46 (23.6%)	9 (4.6%)	4.526	.210
	Non-Facebook	24 (20.3%	64 (54.2%	24 (20.3%	6 (5.1%		
Execution	Facebook	60 (30.8%)	54 (27.7%)	59 (30.3%)	21 (10.8%)	8.858	.031*
	Non-Facebook	36 (30.5%	25 (21.2%	30 (25.4%	27 (22.9%		
Ashamed	Facebook	69 (35.4%)	49 (25.1%)	57 (29.2%)	19 (9.7%)	21.588	.000*
	Non-Facebook	70 (59.3%	15 (12.7%	18 (15.3%	15 (12.7%		
Attention	Facebook	65 (33.3%)	70 (35.9%)	48 (24.6%)	11 (5.6%)	1.117	.773
	Non-Facebook	41 (34.7%	44 (37.3%	24 (20.3%	9 (7.6%		
Strength	Facebook	82 (42.1%)	47 (24.1%)	52 (26.7%)	13 (6.7%)	4.402	.221
	Non-Facebook	60 (50.8%	19 (16.1%	28 (23.7%	11 (9.3%		
Thin	Facebook	44 (22.6%)	85 (43.6%)	55 (28.2%)	10 (5.1%)	8.647	.034*
	Non-Facebook	41 (34.7%	36 (30.5%	31 (26.3%	10 (8.5%		
Should	Facebook	62 (31.8%)	52 (26.7%)	58 (29.7%)	22 (11.3%)	23.800	.000*

	Non-Facebook	38 (32.2%	17 (14.4%	25 (21.2%	38 (32.2%		
Reward	Facebook	45 (23.1%)	76 (39.0%)	55 (28.2%)	18 (9.2%)	4.532	.209
	Non-Facebook	19 (16.1%	58 (49.2%	34 (28.8%	7 (5.9%		
Stamina	Facebook	97 (49.7%)	37 (19.0%)	47 (24.1%)	13 (6.7%)	9.301	.026*
	Non-Facebook	74 (62.7%	25 (21.2%	13 (11.0%	6 (5.1%		
Social Recognition	Facebook	54 (27.7%)	84 (43.1%)	41 (21.0%)	15 (7.7%)	37.563	.000*
	Non-Facebook	8 (6.8%	91 (77.1%	11 (9.3%	8 (6.8%		
Curiosity	Facebook	105 (53.8%)	31 (15.9%)	43 (22.1%)	15 (7.7%)	5.103	.164
	Non-Facebook	78 (66.1%	17 (14.4%	18 (15.3%	5 (4.2%		
Fear	Facebook	84 (43.1%)	40 (20.5%)	47 (24.1%)	23 (11.8%)	12.203	.007*
	Non-Facebook	74 (62.7%	14 (11.9%	17 (14.4%	13 (11.0%		
Identity	Facebook	84 (43.1%)	55 (28.2%)	38 (19.5%)	17 (8.7%)	3.114	.374
	Non-Facebook	59 (50.0%	27 (22.9%	26 (22.0%	6 (5.1%		
Take control	Facebook	89 (45.6%)	47 (24.1%)	48 (24.6%)	10 (5.1%)	3.931	.269
	Non-Facebook	62 (52.5%	18 (15.3%	33 (28.0%	5 (4.2%		
Self-sufficient	Facebook	106 (54.4%)	35 (17.9%)	43 (22.1%)	10 (5.1%)	24.440	.000*
	Non-Facebook	92 (78.0%	11 (9.3%	6 (5.1%	9 (7.6%		
Lose weight	Facebook	42 (21.5%)	71 (36.4%)	70 (35.9%)	11 (5.6%)	13.513	.004*
	Non-Facebook	48 (40.7%	30 (25.4%	33 (28.0%	7 (5.9%		
Attractive	Facebook	37 (19.0%)	79 (40.5%)	74 (37.9%)	5 (2.6%)	9.479	.024*
	Non-Facebook	22 (18.6%	60 (50.8%	28 (23.7%	8 (6.8%		
Physique	Facebook	65 (33.3%)	68 (34.8%)	51 (26.2%)	11 (5.6%)	.408	.939
	Non-Facebook	43 (36.4%	40 (33.9%	28 (23.7%	7 (5.9%		
Empowered	Facebook	81 (41.5%)	49 (25.1%)	46 (23.6%)	19 (9.7%)	10.344	.016*
	Non-Facebook	68 (57.6%	20 (16.9%	26 (22.0%	4 (3.4%		
Beliefs	Facebook	107 (54.9%)	25 (12.8%)	50 (25.6%)	13 (6.7%)	9.539	.023*
	Non-Facebook	84 (71.2%	10 (8.5%	16 (13.6%	8 (6.8%		
Physical Fitness	Facebook	75 (38.5%)	49 (25.1%)	65 (33.3%)	6 (3.1%)	3.078	.380
	Non-Facebook	55 (46.6%	30 (25.4%	29 (24.6%	4 (3.4%		
Failure	Facebook	52 (26.7%)	48 (24.6%)	65 (33.3%)	30 (15.4%)	8.036	.045*
	Non-Facebook	45 (38.1%	17 (14.4%	43 (36.4%	13 (11.0%		
Purpose	Facebook	100 (51.3%)	36 (18.5%)	51 (26.2%)	8 (4.1%)	8.806	.032*

	Non-Facebook	78 (66.1%	15 (12.7%	18 (15.3%	7 (5.9%		
Important	Facebook	73 (37.4%)	37 (19.0%)	61 (31.3%)	24 (12.3%)	4.142	.247
	Non-Facebook	41 (34.7%	14 (11.9%	43 (36.4%	20 (16.9%		
Functionality	Facebook	72 (36.9%)	50 (25.6%)	59 (30.3%)	14 (7.2%)	14.179	.003*
	Non-Facebook	46 (39.0%	20 (16.9%	28 (23.7%	24 (20.3%		
Connection	Facebook	67 (34.4%)	59 (30.3%)	58 (29.7%)	11 (5.6%)	.823	.844
	Non-Facebook	39 (33.1%	41 (34.7%	31 (26.3%	7 (5.9%		
Fame	Facebook	36 (18.5%)	106 (54.4%)	35 (17.9%)	18 (9.2%)	16.133	.001*
	Non-Facebook	6 (5.1%	88 (74.6%	15 (12.7%	9 (7.6%		
Psychological	Facebook	110 (56.4%)	29 (14.9%)	41 (21.0%)	15 (7.7%)	20.042	.000*
health	Non-Facebook	94 (79.7%	13 (11.0%	9 (7.6%	2 (1.7%		
Encouraged	Facebook	70 (35.9%)	65 (33.3%)	51 (26.2%)	9 (4.6%)	.540	.910
	Non-Facebook	46 (39.0%	39 (33.1%	27 (22.9%	6 (5.1%		
Impress Others	Facebook	33 (16.9%)	97 (49.7%)	46 (23.6%)	19 (9.7%)	15.275	.002*
	Non-Facebook	18 (15.3%	82 (69.5%	10 (8.5%	8 (6.8%		
Better	Facebook	64 (32.8%)	53 (27.2%)	59 (30.3%)	19 (9.7%)	8.628	.035*
	Non-Facebook	31 (26.3%	24 (20.3%	39 (33.1%	24 (20.3%		
Enjoy	Facebook	93 (47.7%)	41 (21.0%)	45 (23.1%)	16 (8.2%)	5.667	.129
	Non-Facebook	61 (51.7%	15 (12.7%	36 (30.5%	6 (5.1%		
Compare	Facebook	33 (16.9%)	98 (50.3%)	43 (22.1%)	21 (10.8%)	2.897	.408
	Non-Facebook	16 (13.6%	55 (46.6%	27 (22.9%	20 (16.9%		
Cardio	Facebook	62 (31.8%)	58 (29.7%)	55 (28.2%)	20 (10.3%)	17.149	.001*
	Non-Facebook	59 (50.0%)	22 (18.6%)	18 (15.3%)	19 (16.1%)		
Physical	Facebook	41 (21.0%)	91 (46.7%)	51 (26.2%)	12 (6.2%)	.614	.893
Attractiveness	Non-Facebook	27 (22.9%)	55 (46.6%)	31 (26.3%)	5 (4.2%)		
Money	Facebook	35 (17.9%)	98 (50.3%)	41 (21.0%)	21 (10.8%)	.592	.898
	Non-Facebook	18 (15.3%	59 (50.0%	26 (22.0%	15 (12.7%		
Impression	Facebook	39 (20.0%)	91 (46.7%)	50 (25.6%)	15 (7.7%)	3.787	.285
	Non-Facebook	18 (15.3%	68 (57.6%	26 (22.0%	6 (5.1%		
Health	Facebook	104 (53.3%)	35 (17.9%)	43 (22.1%)	13 (6.7%)	4.813	.186
	Non-Facebook	77 (65.3%	15 (12.7%	18 (15.3%	8 (6.8%		
Internal	Facebook	113 (57.9%)	32 (16.4%)	36 (18.5%)	14 (7.2%)	24.257	.000*

	Non-Facebook	97 (82.2%	11 (9.3%	3 (2.5%	7 (5.9%		
Skills	Facebook	83 (42.6%)	37 (19.0%)	57 (29.2%)	18 (9.2%)	2.257	521
	Non-Facebook	53 (44.9%	20 (16.9%	39 (33.1%	6 (5.1%		
Obligation	Facebook	64 (32.8%)	66 (33.8%)	53 (27.2%)	12 (6.2%)	4.998	.172
	Non-Facebook	31 (26.3%	46 (39.0%	27 (22.9%	14 (11.9%		
Ideal	Facebook	59 (30.3%)	56 (28.7%)	69 (35.4%)	11 (5.6%)	7.210	.065
	Non-Facebook	45 (38.1%	19 (16.1%	44 (37.3%	10 (8.5%		
Lean	Facebook	50 (25.6%)	74 (37.9%)	58 (29.7%)	13 (6.7%)	7.861	.049*
	Non-Facebook	43 (36.4%	31 (26.3%	31 (26.3%	13 (11.0%		
Passion	Facebook	102 (52.3%)	39 (20.0%)	40 (20.5%)	14 (7.2%)	7.413	.060
	Non-Facebook	79 (66.9%	19 (16.1%	13 (11.0%	7 (5.9%		
Challenge	Facebook	55 (28.2%)	49 (25.1%)	77 (39.5%)	14 (7.2%)	4.603	.203
	Non-Facebook	41 (34.7%	20 (16.9%	44 (37.3%	13 (11.0%		
Independence	Facebook	102 (52.3%)	45 (23.1%)	35 (17.9%)	13 (6.7%)	11.535	.009*
	Non-Facebook	81 (68.6%	12 (10.2%	21 (17.8%	4 (3.4%		
Approval	Facebook	49 (25.1%)	85 (43.6%)	79 (25.1%)	12 (6.2%)	12.070	.007*
	Non-Facebook	16 (13.6%	73 (61.9%	20 (16.9%	9 (7.6%		
Mobility	Facebook	70 (35.9%)	60 (30.8%)	46 (23.6%)	19 (9.7%)	5.144	.162
	Non-Facebook	48 (40.7%	23 (19.5%	31 (26.3%	16 (13.6%		
Friends	Facebook	56 (28.7%)	78 (40.0%)	51 (26.2%)	10 (5.1%)	.253	.969
	Non-Facebook	33 (28.0%	50 (42.4%	30 (25.4%	5 (4.2%		
Flexible	Facebook	69 (35.4%)	47 (24.1%)	59 (30.3%)	19 (9.7%)	7.850	.049*
	Non-Facebook	59 (50.0%	25 (21.2%	29 (24.6%	5 (4.2%		
Beneficial	Facebook	63 (32.3%)	46 (23.6%)	37 (34.4%)	19 (9.7%)	.524	.914
	Non-Facebook	40 (33.9%	24 (20.3%	41 (34.7%	13 (11.0%		
Coordination	Facebook	66 (33.8%)	61 (31.3%)	56 (28.7%)	12 (6.2%)	7.298	.063
	Non-Facebook	52 (44.1%	35 ((29.7%	20 (16.9%	11 (9.3%		
Value	Facebook	82 (42.1%)	43 (22.1%)	62 (31.8%)	8 (4.1%)	.492	.921
	Non-Facebook	49 (41.5%	23 (19.5%	40 (33.9%	6 (5.1%		
Personal Best	Facebook	94 (48.2%)	50 (25.6%)	34 (17.4%)	17 (8.7%)	20.510	.000*
	Non-Facebook	85 (72.0%	14 (11.9%	17 (14.4%	2 (1.7%		
Belonging	Facebook	63 (32.3%)	61 (31.3%)	52 (26.7%)	19 (9.7%)	9.175	.027*

	Non-Facebook	33 (28.0%	56 (47.5%	23 (19.5%	6 (5.1%		
Muscle	Facebook	59 (30.3%)	69 (35.4%)	54 (27.7%)	13 (6.7%)	8.145	.043*
	Non-Facebook	47 (39.8%	32 (27.1%	24 (20.3%	15 (12.7%		
Goals	Facebook	91 (46.7%)	43 (22.1%)	47 (24.1%)	14 (7.2%)	6.992	.072
	Non-Facebook	67 (56.8%	14 (11.9%	32 (27.1%	5 (4.2%		
First	Facebook	52 (26.7%)	73 (37.4%)	45 (23.1%)	25 (12.8%)	26.786	.000*
	Non-Facebook	26 (22.0%	26 (22.0%	22 (18.6%	44 (37.3%		
Recognition	Facebook	42 (21.5%)	91 (46.7%)	48 (24.6%)	14 (7.2%)	11.653	.009*
	Non-Facebook	14 (11.9%	77 (65.3%	18 (15.3%	9 (7.6%		
Influencer	Facebook	37 (19.0%)	96 (49.2%)	48 (24.6%)	14 (7.2%)	4.787	.188
	Non-Facebook	13 (11.0%	71 (60.2%	26 (22.0%	8 (6.8%		
Physical health	Facebook	90 (46.2%)	32 (16.4%)	63 (32.3%)	10 (5.1%)	9.949	.019*
	Non-Facebook	75 (63.6%	15 (12.7%	22 (18.6%	6 (5.1%		
Awards	Facebook	33 (16.9%)	109 (55.9%)	42 (21.5%)	11 (5.6%)	1.475	.688
	Non-Facebook	15 (12.7%	72 (61.0%	26 (22.0%	5 (4.2%		
Unpleasant	Facebook	67 (34.4%)	38 (19.5%)	34 (32.8%)	26 (13.3%)	10.404	.015*
	Non-Facebook	33 (28.0%	18 (15.3%	34 (28.8%	33 (28.0%		
Community	Facebook	50 (25.6%)	82 (42.1%)	50 (25.6%)	13 (6.7%)	4.578	.205
	Non-Facebook	24 (20.3%	64 (54.2%	25 (21.2%	5 (4.2%		
Dedication	Facebook	100 (51.3%)	33 (16.9%)	51 (26.2%)	11 (5.6%)	2.669	.446
	Non-Facebook	69 (58.5%	19 (16.1%	22 (18.6%	8 (6.8%		
Mental health	Facebook	104 (53.3%)	33 (16.9%)	47 (24.1%)	11 (5.6%)	15.390	.002*
	Non-Facebook	89 (75.4%	9 (7.6%	16 (13.6%	4 (3.4%		
Shame	Facebook	61 (31.3%)	47 (24.1%)	62 (31.8%)	25 (12.8%)	5.424	.143
	Non-Facebook	51 (43.2%	28 (23.7%	27 (22.9%	12 (10.2%		
Technique	Facebook	79 (40.5%)	56 (28.7%)	44 (22.6%)	16 (8.2%)	8.456	.037*
	Non-Facebook	49 (41.5%	19 (16.1%	33 (28.0%	17 (14.4%		
Knowledge	Facebook	98 (50.3%)	33 (16.9%)	55 (28.2%)	9 (4.6%)	9.842	.020*
	Non-Facebook	75 (63.6%	23 (19.5%	16 (13.6%	4 (3.4%		
Pleasure	Facebook	85 (43.6%)	36 (18.5%)	57 (29.2%)	17 (8.7%)	.739	.864
	Non-Facebook	57 (48.3%	19 (16.1%	33 (28.0%	9 (7.6%		
Build Muscle	Facebook	52 (26.7%)	78 (40.0%)	57 (29.2%)	8 (4.1%)	19.390	.000*

	Non-Facebook	53 (44.9%	27 (22.9%	26 (22.0%	12 (10.2%		
Muscular	Facebook	55 (28.2%)	76 (39.0%)	53 (27.2%)	11 (5.6%)	11.772	.008*
	Non-Facebook	52 (44.1%	28 (23.7%	28 (23.7%	10 (8.5%		
Fun	Facebook	84 (43.1%)	40 (20.5%)	59 (30.3%)	12 (6.2%)	7.911	.048*
	Non-Facebook	33 (28.0%	26 (22.0%	48 (40.7%	11 (9.3%		
Improvements	Facebook	73 (37.4%)	51 (26.2%)	59 (28.7%)	15 (7.7%)	7.139	.068
	Non-Facebook	50 (42.4%	17 (14.4%	44 (37.3%	7 (5.9%		
Personal Value	Facebook	105 (53.8%)	35 (17.9%)	44 (22.6%)	11 (5.6%)	17.642	.001*
	Non-Facebook	90 (76.3%	14 (11.9%	9 (7.6%	5 (4.2%		
Role Model	Facebook	57 (29.2%)	71 (36.4%)	52 (26.7%)	15 (7.7%)	3.728	.292
	Non-Facebook	30 (25.4%	52 (44.1%	32 (27.1%	4 (3.4%		
External	Facebook	29 (14.9%)	114 (58.5%)	40 (20.5%)	12 (6.2%)	18.428	.000*
	Non-Facebook	9 (7.6%	93 (78.8%	7 (5.9%	9 (7.6%		
Toned	Facebook	50 (25.6%)	69 (35.4%)	55 (28.2%)	21 (10.8%)	6.475	.091
	Non-Facebook	46 (39.0%	33 (28.0%	30 (25.4%	9 (7.6%		
Financial Success	Facebook	44 (22.6%)	64 (32.8%)	70 (35.9%)	17 (8.7%)	5.343	.148
	Non-Facebook	26 (22.0%	53 (44.9%	31 (26.3%	8 (6.8%		
Improve Form	Facebook	60 (30.8%)	57 (29.2%)	55 (28.2%)	23 (11.8%)	14.655	.002*
	Non-Facebook	60 (50.8%	26 (22.0%	27 (22.9%	5 (4.2%		
Perks	Facebook	38 (19.5%)	86 (44.1%)	55 (28.2%)	16 (8.2%)	3.581	.310
	Non-Facebook	20 (16.9%	56 (47.5%	26 (22.0%	16 (13.6%		
Appearance	Facebook	41 (21.0%)	88 (45.1%)	54 (27.7%)	11 (5.6%)	5.476	.140
	Non-Facebook	19 (16.1%	66 (55.9%	31 (26.3%	2 (1.7%		
Have to	Facebook	38 (19.5%)	71 (36.4%)	56 (28.7%)	29 (14.9%)	10.099	.018*
	Non-Facebook	34 (28.8%	29 (24.6%	27 (22.9%	28 (23.7%		
Strong	Facebook	66 (33.8%)	52 (26.7%)	60 (30.8%)	16 (8.2%)	13.558	.004*
	Non-Facebook	56 (47.5%	14 (11.9%	43 (36.4%	5 (4.2%		
Idealized	Facebook	53 (27.2%)	63 (32.3%)	56 (28.7%)	21 (10.8%)	4.237	.237
	Non-Facebook	36 (30.5%	48 (40.7%	26 (22.0%	8 (6.8%		
Appealing	Facebook	42 (21.5%)	73 (37.4%)	62 (31.8%)	17 (8.7%)	2.126	.547
	Non-Facebook	34 (28.8%	42 (35.6%	33 (28.0%	9 (7.6%		
Gain weight	Facebook	49 (25.1%)	77 (39.5%)	55 (28.2%)	13 (6.7%)	11.166	.011*

	Non-Facebook	49 (41.5%	33 (28.0%	25 (21.2%	11 (9.3%		
Energy	Facebook	95 (48.7%)	44 (22.6%)	43 (22.1%)	12 (6.2%)	3.239	.356
	Non-Facebook	67 (56.8%	18 (15.3%	24 (20.3%	9 (7.6%		
Compete	Facebook	47 (24.1%)	76 (39.0%)	53 (27.2%)	18 (9.2%)	2.664	.446
	Non-Facebook	21 (17.8%	56 (47.5%	31 (26.3%	10 (8.5%		
Personality	Facebook	94 (48.2%)	44 (22.6%)	45 (23.1%)	11 (5.6%)	9.413	.024*
	Non-Facebook	78 (66.1%	16 (13.6%	19 (16.1%	5 (4.2%		
Relationships	Facebook	62 (31.8%)	75 (38.5%)	46 (23.6%)	10 (5.1%)	.394	.941
	Non-Facebook	40 (33.9%	43 (36.4%	30 (25.4%	5 (4.2%		
Growth	Facebook	88 (45.1%)	46 (23.6%)	46 (23.6%)	14 (7.2%)	5.592	.133
	Non-Facebook	67 (56.8%	17 (14.4%	28 (23.7%	6 (5.1%		
Worry	Facebook	88 (45.1%)	42 (21.5%)	49 (25.1%)	15 (7.7%)	18.657	.000*
	Non-Facebook	70 (59.3%	9 (7.6%	20 (16.9%	19 (16.1%		
Pressured	Facebook	51 (26.2%)	80 (41.0%)	52 (26.7%)	11 (5.6%)	5.003	.172
	Non-Facebook	24 (20.3%	24 (20.3%	28 (23.7%	14 (11.9%		
Accountability	Facebook	65 (33.3%)	50 (25.6%)	58 (29.7%)	21 (10.8%)	3.968	.265
	Non-Facebook	45 (38.1%)	37 (31.4%)	29 (24.6%)	7 (5.9%)		

Table 9

Goal Word Reading Level – Dale-Chall Readability (Dale & Chall, 1948)

At or Below a Grade 5 Reading Level			
Attention	Goals	Satisfaction	
Beliefs	Growth	Self-Worth	
Belonging	Have to	Shame	
Best	Health	Should	
Better	Ideal	Strong	
Compare	Important	Thin	
Connection	Improve Form	Toned	
Doctor's Orders	Improvements	Unpleasant	
Enjoy	Interests	Value	
Exciting	Lean	Want	
Failure	Lose weight	Weight	
Fear	Mastery	Win	
First	Money	Worry	
Fit	Personal Best		
Friends	Personal Value		
Fun	Pleasure		
Gain weight	Reward		
Above a Grade 5 Reading Level			
Accountability	External	Passion	Stamina
Appealing	Fame	Peer Pressure	Status
Appearance	Financial Success	Perform	Strength
Appraisal	Fitness	Perks	Take control
Approval	Flexible	Personality	Technique
Ashamed	Functionality	Physical Attractiveness	
Attractive	Guilt	Physical Fitness	
Awards	Idealized	Physical health	
Beneficial	Identity	Physique	
Boredom	Image	Popularity	
Build Muscle	Impress Others	Pressured	
Cardio	Impression	Psychological health	
Challenge	Independence	Purpose	
Community	Influence	Recognition	
Compete	Influencer	Relationships	
Coordination	Internal	Role Model	
Curiosity	Knowledge	Self-Acceptance	
Dedication	Mental health	Self-Esteem	
Empowered	Mobility	Self-Sufficient	
Encouraged	Muscle	Skills	
Energy	Muscular	Social Interaction	
Execution	Obligation	Social Recognition	

Figure 1: The Six Mini Theories of Self-Determination Theory

(Deci & Ryan, 2000; Ryan & Deci, 2017)

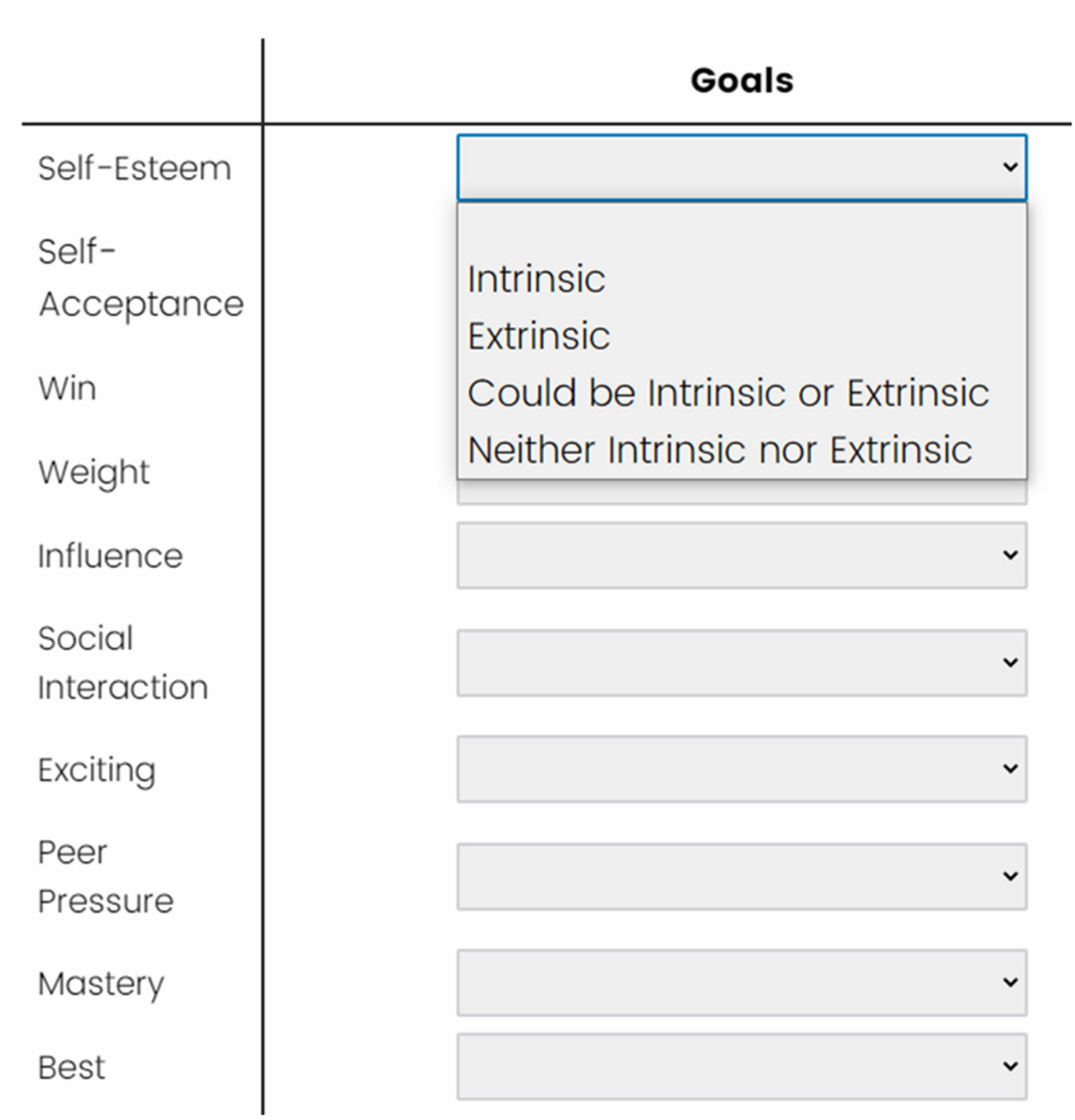

Figure 2: Response Options Displayed to General Population Participants

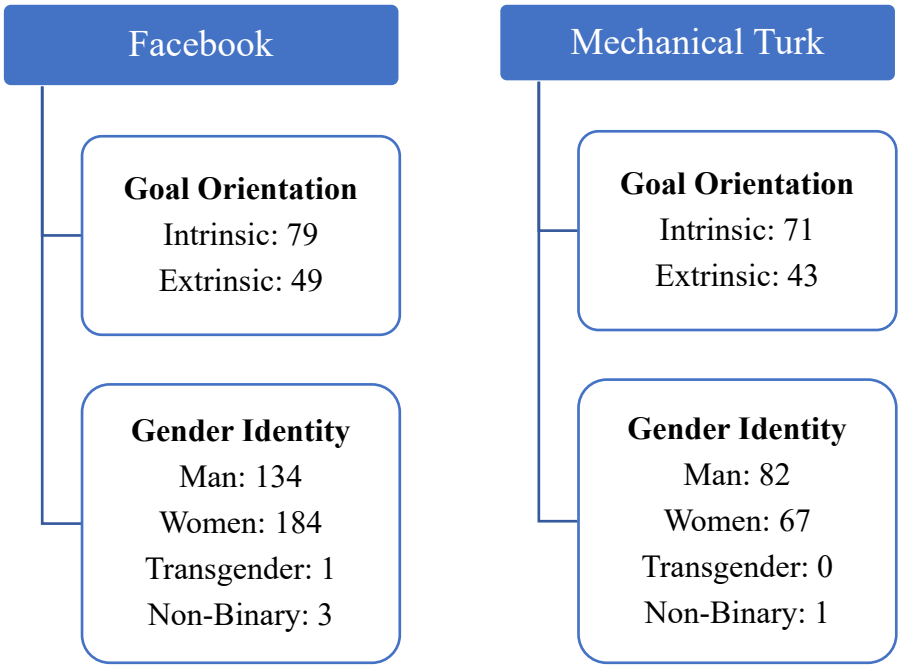

Figure 3: General Participant Demographics by Data Collection Modality

Appendix 1: Expert Participant Survey Package

Dear Participant:

You have been invited to participate in a study titled "Validating Intrinsic and Extrinsically Framed Words for Exercise Promotion Messaging Research" carried out by Hayley Wall (M.Sc. Kinesiology student), and Dr. Paige Pope of the Department of Kinesiology and Physical Education at the University of Lethbridge. The objective of this study is to assess the validity of exercise-related words, framed from the theoretical perspective of Self-Determination Theory. Information gathered from this survey will be used to create a validated word bank for researchers and message designers alike who wish to test or communicate persuasive exercise messages.

If you agree to participate in this study, you will first be asked to complete a brief demographics questionnaire followed by a word categorization task. This second section will require you to examine a list of words and rate the degree to which each word matches the provided conceptual definition of both intrinsic/extrinsic goals and autonomous/controlling motives. Additionally, for each item, you will be given the opportunity to give any additional feedback on technical aspects of the items (i.e., reading difficulty, item length, etc.).

The total time that this survey should take is approximately 30-45 minutes. There are no anticipated risks associated with completing this survey, as well as no anticipated personal benefits. However, this study is essential for the development of a validated word bank, which will make a valuable contribution to research investigating attention to exercise promotion messaging and well as health promotion messaging in general. The results from this study will be presented as part of a master's thesis and in academic reports and publication in scholarly journals. At no time, however, will your name be used, or any identifying information revealed. All contact information will be stored separately from survey responses.

Participation is voluntary and confidential, however, as with any online survey, neither anonymity nor confidentiality can be completely guaranteed. The survey is being hosted on Qualtrics and their privacy policy can be accessed at https://www.qualtrics.com/privacy- statement/. All completed surveys will be stored on a password-protected computer on the University of Lethbridge campus within a locked office. Survey responses will be stored for up to 5 years following the completion of this study and subsequent publication of the findings, after which all data will be permanently deleted.

You as a participant have the right to withdraw from the survey at any time during the survey without penalty by simply closing the browser that the survey has been opened in. Once the survey has been submitted, there will be no way to withdraw your response because there is no way to link you to your survey response.

If you have questions about this study or would like to request a summary of the results, please contact Hayley Wall of the University of Lethbridge, at h.wall@uleth.ca, or at 403-332-5207, or Dr. Paige Pope of the University of Lethbridge at paige.pope@uleth.ca, or 403-332-4435.

If you have questions about your rights as a participant in this research please contact the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or email research.services@uleth.ca).

Do you consent to participate in this study?

- ○ Yes (1)
- ○ No (2)

End of Block: Informed Consent

Start of Block: Demographics

Gender Identity (select all that apply):

- ☐ Man (1)
- ☐ Women (2)
- ☐ Transgender (3)
- ☐ Non-binary/non-conforming (5)
- ☐ Prefer Not to Answer (4)
- ☐ Option not listed here (6)

What is your age?

_____

What is the highest level of education you have completed?

- ○ Bachelor's degree (1)
- ○ Master's degree (2)
- ○ Doctorate (3)
- ○ Professional degree (4)
- ○ Other (5)

What is your current position?

- ○ Instructor (1)
- ○ Assistant Professor (2)
- ○ Associate Professor (3)
- ○ Professor (4)
- ○ Other (5)

What is your main area of research?

_____

How many articles have your published in each of the following categories:

	Number of Publications			
	0-3 (1)	4-6 (2)	7-10 (3)	10+ (4)
Scale Development (1)	○	○	○	○
Goals or goal content from a Self-Determination Theory perspective (2)	○	○	○	○
Motivation from a Self-Determination Theory perspective (5)	○	○	○	○
Research in the physical activity context guided by Self-Determination Theory (4)	○	○	○	○
Generally using Self-Determination Theory as the	○	○	○	○

guiding theory (3)

End of Block: Demographics

Start of Block: Definitions

Below you will find a list of words that have been generated based on previous research in Self-Determination Theory messaging as well as goal content and motivation scales. The intention is that once validated, these words will be used in a variety of message framing research tasks.

FOR EACH WORD, PLEASE CHOOSE ONE RESPONSE FROM BOTH THE GOAL AND MOTIVATION DROP-DOWN MENUS. When evaluating these words we would like you to consider the following definitions of intrinsic and extrinsic goals and autonomous and controlling motivation:

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

End of Block: Definitions

Start of Block: Word Set 1

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. **Motivation** Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Self-Acceptance (1)	○	○	○	○	○	○	○	○
Peer Pressure (2)	○	○	○	○	○	○	○	○

Fitness (3)	○	○	○	○	○	○	○	○
Social Interaction (4)	○	○	○	○	○	○	○	○
Boredom (5)	○	○	○	○	○	○	○	○
Influence (6)	○	○	○	○	○	○	○	○
Self-Esteem (7)	○	○	○	○	○	○	○	○
Mastery (8)	○	○	○	○	○	○	○	○
Satisfaction (9)	○	○	○	○	○	○	○	○
Weight (10)	○	○	○	○	○	○	○	○
Exciting (11)	○	○	○	○	○	○	○	○
Win (12)	○	○	○	○	○	○	○	○
Best (13)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ Yes (1)

○ No (2)

If so, please provide any feedback here:

_____
_____
_____
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_____

End of Block: Word Set 1

Start of Block: Word Set 2

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Perform (1)	○	○	○	○	○	○	○	○
Fit (2)	○	○	○	○	○	○	○	○
Interests (3)	○	○	○	○	○	○	○	○
Self-Worth (4)	○	○	○	○	○	○	○	○
Appraisal (5)	○	○	○	○	○	○	○	○
Doctor's Orders (6)	○	○	○	○	○	○	○	○
Popularity (7)	○	○	○	○	○	○	○	○
Status (8)	○	○	○	○	○	○	○	○
Want (9)	○	○	○	○	○	○	○	○
Guilt (10)	○	○	○	○	○	○	○	○

Image (11)	○	○	○	○	○	○	○	○
Execution (12)	○	○	○	○	○	○	○	○
Ashamed (13)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ Yes (1)

○ No (2)

If so, please provide any feedback here:

_____
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End of Block: Word Set 2

Start of Block: Word Set 3

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and

development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Attention (1)	○	○	○	○	○	○	○	○
Strength (2)	○	○	○	○	○	○	○	○
Thin (3)	○	○	○	○	○	○	○	○
Should (4)	○	○	○	○	○	○	○	○
Reward (5)	○	○	○	○	○	○	○	○

Stamina (6)	○	○	○	○	○	○	○	○
Social Recognition (7)	○	○	○	○	○	○	○	○
Curiosity (8)	○	○	○	○	○	○	○	○
Fear (9)	○	○	○	○	○	○	○	○
Identity (10)	○	○	○	○	○	○	○	○
Take Control (11)	○	○	○	○	○	○	○	○
Self-Sufficient (12)	○	○	○	○	○	○	○	○
Lose Weight (13)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ Yes (1)
- ○ No (2)

If so, please provide any feedback here:

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_____
_____
_____
_____

End of Block: Word Set 3

Start of Block: Word Set 4

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic	Neither Intrinsic nor	Autonomous (1)	Controlling (2)	Could be Autonomous or	Neither Autonomous nor

			or Extrinsic (3)	Extrinsic (4)			Controlling (3)	Controlling (4)
Attractive (1)	○	○	○	○	○	○	○	○
Physique (2)	○	○	○	○	○	○	○	○
Empowered (3)	○	○	○	○	○	○	○	○
Beliefs (4)	○	○	○	○	○	○	○	○
Physical Fitness (5)	○	○	○	○	○	○	○	○
Failure (6)	○	○	○	○	○	○	○	○
Purpose (7)	○	○	○	○	○	○	○	○
Important (8)	○	○	○	○	○	○	○	○
Functionality (9)	○	○	○	○	○	○	○	○
Connection (10)	○	○	○	○	○	○	○	○
Fame (11)	○	○	○	○	○	○	○	○
Psychological Health (12)	○	○	○	○	○	○	○	○

Encouraged (13)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ Yes (1)
- ○ No (2)

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Word Set 4

Start of Block: Word Set 5

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling

motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Impress Others (1)	○	○	○	○	○	○	○	○
Better (2)	○	○	○	○	○	○	○	○
Enjoy (3)	○	○	○	○	○	○	○	○
Compare (4)	○	○	○	○	○	○	○	○
Cardio (5)	○	○	○	○	○	○	○	○
Physical Attractiveness (6)	○	○	○	○	○	○	○	○

Money (7)	○	○	○	○	○	○	○	○
Impression (8)	○	○	○	○	○	○	○	○
Health (9)	○	○	○	○	○	○	○	○
Internal (10)	○	○	○	○	○	○	○	○
Skills (11)	○	○	○	○	○	○	○	○
Obligation (12)	○	○	○	○	○	○	○	○
Ideal (13)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ Yes (1)
- ○ No (2)

If so, please provide any feedback here:

_____
_____
_____
_____

End of Block: Word Set 5

Start of Block: Word Set 6

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Lean (14)	○	○	○	○	○	○	○	○

Passion (15)	○	○	○	○	○	○	○	○
Challenge (16)	○	○	○	○	○	○	○	○
Independence (17)	○	○	○	○	○	○	○	○
Approval (18)	○	○	○	○	○	○	○	○
Mobility (19)	○	○	○	○	○	○	○	○
Friends (20)	○	○	○	○	○	○	○	○
Flexible (21)	○	○	○	○	○	○	○	○
Beneficial (22)	○	○	○	○	○	○	○	○
Coordination (23)	○	○	○	○	○	○	○	○
Value (24)	○	○	○	○	○	○	○	○
Personal Best (25)	○	○	○	○	○	○	○	○
Belonging (26)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ Yes (1)
- ○ No (2)

If so, please provide any feedback here:

_____
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End of Block: Word Set 6

Start of Block: Word Set 7

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Muscle (27)	○	○	○	○	○	○	○	○
Goals (28)	○	○	○	○	○	○	○	○
First (29)	○	○	○	○	○	○	○	○
Recognition (30)	○	○	○	○	○	○	○	○
Influencer (31)	○	○	○	○	○	○	○	○
Physical Health (32)	○	○	○	○	○	○	○	○
Awards (33)	○	○	○	○	○	○	○	○
Unpleasant (34)	○	○	○	○	○	○	○	○
Community (35)	○	○	○	○	○	○	○	○

Dedication (36)	○	○	○	○	○	○	○	○
Mental Health (37)	○	○	○	○	○	○	○	○
Shame (38)	○	○	○	○	○	○	○	○
Technique (39)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ Yes (1)

○ No (2)

If so, please provide any feedback here:

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End of Block: Word Set 7

Start of Block: Word Set 8

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals				**Motivation**			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Knowledge (40)	○	○	○	○	○	○	○	○
Pleasure (41)	○	○	○	○	○	○	○	○
Build Muscle (42)	○	○	○	○	○	○	○	○

Muscular (43)	○	○	○	○	○	○	○	○
Fun (44)	○	○	○	○	○	○	○	○
Improvements (45)	○	○	○	○	○	○	○	○
Personal Value (46)	○	○	○	○	○	○	○	○
Role Model (47)	○	○	○	○	○	○	○	○
External (48)	○	○	○	○	○	○	○	○
Toned (49)	○	○	○	○	○	○	○	○
Financial Success (50)	○	○	○	○	○	○	○	○
Improve Form (51)	○	○	○	○	○	○	○	○
Perks (52)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ Yes (1)
- ○ No (2)

If so, please provide any feedback here:

_____
_____
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_____
_____

End of Block: Word Set 8

Start of Block: Word Set 9

Goals

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world. Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items. Motivation Autonomous motives guide behaviour to be acted on because the activity itself is personally valued, such as motives based on enjoyment, personal development, mastering challenges, health, connection with significant others, or alignment with core values and beliefs. Controlling motives drive behaviour to be acted on as a way to satisfy either internal or external pressure, such as feelings of guilt, obligation, sense of self-worth, approval or attention from others, rewards, or to avoid punishment or criticisms.

For each word, please choose one response from both the goal and motivation drop-down menus. When evaluating these words we would like you to consider them using the definitions above and in an exercise context.

	Goals	**Motivation**

	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)	Autonomous (1)	Controlling (2)	Could be Autonomous or Controlling (3)	Neither Autonomous nor Controlling (4)
Appearance (53)	○	○	○	○	○	○	○	○
Have To (54)	○	○	○	○	○	○	○	○
Strong (55)	○	○	○	○	○	○	○	○
Idealized (56)	○	○	○	○	○	○	○	○
Appealing (57)	○	○	○	○	○	○	○	○
Gain Weight (58)	○	○	○	○	○	○	○	○
Energy (59)	○	○	○	○	○	○	○	○
Compete (60)	○	○	○	○	○	○	○	○
Personality (61)	○	○	○	○	○	○	○	○
Relationships (62)	○	○	○	○	○	○	○	○
Growth (63)	○	○	○	○	○	○	○	○

Worry (64)	○	○	○	○	○	○	○	○
Pressured (65)	○	○	○	○	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ Yes (1)

○ No (2)

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Word Set 9

Start of Block: Additional Words

Are there any additional words (intrinsic, extrinsic, controlling, autonomous) you feel should be included in the word bank?

○ Yes (1)

○ No (2)

If so, please provide any additional words (intrinsic, extrinsic, controlling, autonomous) you feel should be included and whether you would classify them as intrinsic or extrinsic. You may include multiple words in the text box below.

_____
_____
_____
_____
_____

End of Block: Additional Words

Appendix 2: General Population Survey Package

Dear Participant:

You are being invited to participate in a research study on exercise promotion messaging. The study will be carried out by Hayley Wall (M.Sc. Kinesiology student) and Brianna Faber (B.Sc. Kinesiology student), under the supervision of Dr. Paige Pope at the University of Lethbridge. In order to participate in this study, you must be at least 18 years of age and under 65 years of age or have turned 65 this year (born in 1956 or later). Information gathered from this survey will be used to create a word bank for research on how to communicate persuasive exercise messages. You may choose to end your participation in this study at any time. If you choose to withdraw from this study, there will be no negative consequences. We anticipate that this survey will take 15-25 minutes to complete.

If you agree to participate in this study, you will be asked to complete a brief demographics questionnaire followed by a word categorization task. This second section will require you to examine a list of words rate the degree to which each word matches the provided conceptual definition of either intrinsic or extrinsic goals (Study A) or autonomous and controlling motives (Study B). You will only receive definitions and words for either goals or motives, not both. Following this word categorization, you will be asked to complete 3 short questionnaires, the Goal Content for Exercise Questionnaire, Behavioural Regulation in Exercise Questionnaire, and a Godin Leisure-Time Exercise Questionnaire. If you leave a question unanswered, the survey will provide you with a prompt that a question has been missed. You are not required to fill in any questions that you wish to leave blank.

There are no direct benefits to you from participating in this study; however, you will be contributing to a better understanding of how to communicate exercise promotion messages which may help us to improve exercise rates among adults. Additionally, individuals who consent to participate in this study, regardless of if they withdraw prior to survey completion, will have the opportunity to be entered into a draw for a $25 VISA gift card. For every 100 draw entries in this study, one draw will take place, putting the odds of winning a gift card at approximately 1 in 100. To enter, an email must be provided so that the winners can be contacted with the results of the draw. All email addresses collected for the purpose of entering the draw will be deleted immediately following the notification of the draw winners and will not be connected to survey responses in anyway. There are no anticipated risks related to this research.

Your participation in this research is voluntary and confidential, however, as with any online survey, neither anonymity nor

confidentiality can be completely guaranteed. The survey is being hosted on Qualtrics and their privacy policy can be accessed at https://www.qualtrics.com/privacy- statement/. All completed surveys will be stored on a password-protected computer within a locked office. Survey responses will be stored for up to 5 years following the completion of this study and subsequent publication of the findings, after which all data will be permanently deleted.

Participants have the right to withdraw from the survey at any time during the survey without penalty by simply closing the browser that the survey has been opened in. Once the survey has been submitted, there will be no way to withdraw your response because there is no way to link you to your survey response.

The results from this study will be presented as part of a Masters Thesis, undergraduate independent study presentation and in academic reports and presentations. At no time, however, will your name be used, or any identifying information revealed unless you have given consent.

If you have questions about this study or would like to request a summary of the results, please contact Hayley Wall of the University of Lethbridge, at h.wall@uleth.ca, or at 403-332-5207, or Dr. Paige Pope of the University of Lethbridge at paige.pope@uleth.ca, or 403-332-4435.

If you have questions about your rights as a participant in this research please contact the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or email research.services@uleth.ca).

I consent to participate in this study:

- ○ Yes (1)
- ○ No (2)

Are you at least 18 years of age and under 65 years of age or have turned 65 this year (born in 1956 or later)?

- ○ Yes (1)
- ○ No (2)

End of Block: Informed Consent

Start of Block: Visa Card Entry

Would you like to be entered into a draw for a $25 Visa E-card?

- ○ Yes (1)
- ○ No (2)

If yes, please enter a valid email address below that we could use to contact you in the event that you win.

_____

End of Block: Visa Card Entry

Start of Block: Demographics

In this section we will ask you some questions about you. Please feel free to be completely honest. This survey is completely anonymous and confidential; your answers will not have a name or email address associated with them.

Please enter your age in numbers (e.g., 49):

_____

How would you classify your gender identity (select all that apply)

- ☐ **Man (1)**
- ☐ **Woman (2)**
- ☐ **Transgender (3)**
- ☐ **Non-binary/non-conforming (5)**
- ☐ **Prefer Not to Answer (4)**

Which of the following do you identify as? (select all that apply)

- ☐ **Asian (1)**
- ☐ **Black (12)**

- [ ] **Caucasian (3)**
- [ ] **Hispanic (2)**
- [ ] **Indigenous (4)**
- [ ] **Other option not listed here (14)**

If you selected other in the question above please specify

_____

Are you currently a student?

- ○ **Yes (1)**
- ○ **No (2)**

What is the highest level of education that you have completed?

- ○ **Less than grade 8 (1)**
- ○ **Grade 8 (2)**
- ○ **High school (3)**

- ○ **College degree/diploma (4)**
- ○ **University undergraduate degree/diploma (5)**
- ○ **University graduate degree (6)**
- ○ **I prefer not to disclose (7)**

How much do you weigh? (Please enter weight in pounds, e.g., 180 lbs)

_____

What is your height? (Please enter height in feet and inches, e.g., 5'1")

_____

End of Block: Demographics

Start of Block: Goals Definitions

Below you will find a list of words that have been generated based on previous research in Self-Determination Theory messaging as well as goal content and motivation scales. The intention is that once validated, these words will be used in a variety of message framing research tasks.

FOR EACH WORD, PLEASE CHOOSE A RESPONSE FROM THE DROP-DOWN MENU. When evaluating these words we would like you to consider the following definitions of intrinsic and extrinsic goals:

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

End of Block: Goals Definitions

Start of Block: Goals Word Set 1

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals

	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Self-Acceptance (1)	○	○	○	○
Peer Pressure (2)	○	○	○	○
Fitness (3)	○	○	○	○
Social Interaction (4)	○	○	○	○
Boredom (5)	○	○	○	○
Influence (6)	○	○	○	○
Self-Esteem (7)	○	○	○	○
Mastery (8)	○	○	○	○
Satisfaction (9)	○	○	○	○
Weight (10)	○	○	○	○

Exciting (11)	○	○	○	○
Win (12)	○	○	○	○
Best (13)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ **Yes (1)**
- ○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 1

Start of Block: Goals Word Set 2

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Perform (1)	○	○	○	○
Fit (2)	○	○	○	○
Interests (3)	○	○	○	○
Self-Worth (4)	○	○	○	○

Appraisal (5)	○	○	○	○
Doctor's Orders (6)	○	○	○	○
Popularity (7)	○	○	○	○
Status (8)	○	○	○	○
Want (9)	○	○	○	○
Guilt (10)	○	○	○	○
Image (11)	○	○	○	○
Execution (12)	○	○	○	○
Ashamed (13)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ **Yes (1)**

○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 2

Start of Block: Goals Word Set 3

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals

	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Attention (1)	○	○	○	○
Strength (2)	○	○	○	○
Thin (3)	○	○	○	○
Should (4)	○	○	○	○
Reward (5)	○	○	○	○
Stamina (6)	○	○	○	○
Social Recognition (7)	○	○	○	○
Curiosity (8)	○	○	○	○
Fear (9)	○	○	○	○
Identity (10)	○	○	○	○

Take Control (11)	○	○	○	○
Self-Sufficient (12)	○	○	○	○
Lose Weight (13)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ **Yes (1)**

○ **No (2)**

If so, please provide any feedback here:

_____

_____

_____

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End of Block: Goals Word Set 3

Start of Block: Goals Word Set 4

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Attractive (1)	○	○	○	○
Physique (2)	○	○	○	○
Empowered (3)	○	○	○	○
Beliefs (4)	○	○	○	○

Physical Fitness (5)	○	○	○	○
Failure (6)	○	○	○	○
Purpose (7)	○	○	○	○
Important (8)	○	○	○	○
Functionality (9)	○	○	○	○
Connection (10)	○	○	○	○
Fame (11)	○	○	○	○
Psychological Health (12)	○	○	○	○
Encouraged (13)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ **Yes (1)**

○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 4

Start of Block: Goals Word Set 5

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals

	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Impress Others (1)	○	○	○	○
Better (2)	○	○	○	○
Enjoy (3)	○	○	○	○
Compare (4)	○	○	○	○
Cardio (5)	○	○	○	○
Physical Attractiveness (6)	○	○	○	○
Money (7)	○	○	○	○
Impression (8)	○	○	○	○
Health (9)	○	○	○	○

Internal (10)	○	○	○	○
Skills (11)	○	○	○	○
Obligation (12)	○	○	○	○
Ideal (13)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ **Yes (1)**
- ○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 5

Start of Block: Goals Word Set 6

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Lean (14)	○	○	○	○
Passion (15)	○	○	○	○
Challenge (16)	○	○	○	○

Independence (17)	○	○	○	○
Approval (18)	○	○	○	○
Mobility (19)	○	○	○	○
Friends (20)	○	○	○	○
Flexible (21)	○	○	○	○
Beneficial (22)	○	○	○	○
Coordination (23)	○	○	○	○
Value (24)	○	○	○	○
Personal Best (25)	○	○	○	○
Belonging (26)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

○ **Yes (1)**

○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 6

Start of Block: Goals Word Set 7

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Muscle (27)	○	○	○	○
Goals (28)	○	○	○	○
First (29)	○	○	○	○
Recognition (30)	○	○	○	○
Influencer (31)	○	○	○	○
Physical Health (32)	○	○	○	○
Awards (33)	○	○	○	○
Unpleasant (34)	○	○	○	○

Community (35)	○	○	○	○
Dedication (36)	○	○	○	○
Mental Health (37)	○	○	○	○
Shame (38)	○	○	○	○
Technique (39)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ **Yes (1)**
- ○ **No (2)**

If so, please provide any feedback here:

_____

_____

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End of Block: Goals Word Set 7

Start of Block: Goals Word Set 8

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Knowledge (40)	○	○	○	○
Pleasure (41)	○	○	○	○

Build Muscle (42)	○	○	○	○
Muscular (43)	○	○	○	○
Fun (44)	○	○	○	○
Improvements (45)	○	○	○	○
Personal Value (46)	○	○	○	○
Role Model (47)	○	○	○	○
External (48)	○	○	○	○
Toned (49)	○	○	○	○
Financial Success (50)	○	○	○	○
Improve Form (51)	○	○	○	○
Perks (52)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ **Yes (1)**
- ○ **No (2)**

If so, please provide any feedback here:

_____
_____
_____
_____
_____

End of Block: Goals Word Set 8

Start of Block: Goals Word Set 9

Intrinsic goals aim to achieve something focused inward that relates to your physical or mental health, personal growth and development, as well as your relationships with friends, family, or loved ones, or helping your community or the broader world.

Extrinsic goals aim to achieve something that is dependent on approval from others including appearance, image, popularity or social status, or on tangible rewards from other people or organizations such as money or swag items.

For each word, please choose one response from the drop-down menu. When evaluating these words we would like you to consider them using the definitions above, in an exercise context.

	Goals			
	Intrinsic (1)	Extrinsic (2)	Could be Intrinsic or Extrinsic (3)	Neither Intrinsic nor Extrinsic (4)
Appearance (53)	○	○	○	○
Have To (54)	○	○	○	○
Strong (55)	○	○	○	○
Idealized (56)	○	○	○	○
Appealing (57)	○	○	○	○
Gain Weight (58)	○	○	○	○
Energy (59)	○	○	○	○
Compete (60)	○	○	○	○

Personality (61)	○	○	○	○
Relationships (62)	○	○	○	○
Growth (63)	○	○	○	○
Worry (64)	○	○	○	○
Pressured (65)	○	○	○	○
Accountability (66)	○	○	○	○

Do you have any comments or feedback regarding the words listed above?

- ○ **Yes (1)**
- ○ **No (2)**

If so, please provide any feedback here:

_____

_____

_____

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End of Block: Goals Word Set 9

Start of Block: Goal Content for Exercise

Goals for Exercise

Exercisers might have very different goals on their minds for exercise. For example, some people are exercising because they believe that it will help them to become more appealing to others, whereas others believe it will help them become healthy. The following questionnaire explores the kind of goals you might have in mind while exercising. Please indicate to what extent these goals are important for you when exercising. Please be as honest as possible.

INSTRUCTIONS: In the box below you will find a goal you might have while exercising and the options 1-7 to rate how important that goal is to you. Once you select an option from 1-7 the statement in the box will be replaced with a new goal. Please do not advance to the next page until you have selected an option for all goals (a new goal will no longer be displayed).

	Not at all Important 1 (16)	2 (42)	3 (18)	Moderately Important 4 (19)	5 (20)	6 (21)	Extremely Important 7 (22)
To connect with others in a meaningful manner (1)	○	○	○	○	○	○	○

To improve the look of my overall body shape (2)	○	○	○	○	○	○	○
To increase my resistance to illness and disease (3)	○	○	○	○	○	○	○
To be well thought of by others (4)	○	○	○	○	○	○	○
To acquire new exercise skills (5)	○	○	○	○	○	○	○
To share my exercise experiences with people	○	○	○	○	○	○	○

that care for me (6)							
To improve my appearance (7)	○	○	○	○	○	○	○
To increase my energy level (8)	○	○	○	○	○	○	○
To be socially respected by others (9)	○	○	○	○	○	○	○
To learn and exercise new exercise techniques (10)	○	○	○	○	○	○	○
To develop close	○	○	○	○	○	○	○

friendships (11)							
To be slim and to look attractive to others (13)	○	○	○	○	○	○	○
To improve my overall health (14)	○	○	○	○	○	○	○
To gain favorable approval from others (15)	○	○	○	○	○	○	○
To become skilled at a certain exercise or activity (16)	○	○	○	○	○	○	○
To form close bonds	○	○	○	○	○	○	○

with others (17)							
To change my appearance by altering a specific area of my body (18)	○	○	○	○	○	○	○
To improve my endurance or stamina (19)	○	○	○	○	○	○	○
So that others recognize me as an exerciser (20)	○	○	○	○	○	○	○
To develop my exercise skills (21)	○	○	○	○	○	○	○

STOP! Did you provide a 1-7 ranking for all 20 items in the above question? You should have received 20 prompts. If you have only read 1 goal statement please scroll up and look again!

End of Block: Goal Content for Exercise

Start of Block: BREQ- 3

We are interested in the reasons underlying peoples' decisions to engage or not engage in physical exercise. Using the scale below, please indicate to what extent each of the following items is true for you. Please note that there are no right or wrong answers and no trick questions. We simply want to know how you personally feel about exercise. Your responses will be held in confidence and only used for our research purposes.

Why do you engage in exercise?

	Not true for me 0 (1)	1 (6)	Sometimes true for me 2 (2)	3 (3)	Very true for me 4 (4)
It's important to me to exercise regularly (1)	○	○	○	○	○

I don’t see why I should have to exercise (2)	○	○	○	○	○
I exercise because it’s fun (3)	○	○	○	○	○
I feel guilty when I don’t exercise (4)	○	○	○	○	○
I exercise because it is consistent with my life goals (5)	○	○	○	○	○
I exercise because other people say I should (6)	○	○	○	○	○
I value the benefits of exercise (7)	○	○	○	○	○
I can’t see why I should bother exercising (8)	○	○	○	○	○
I enjoy my exercise sessions (9)	○	○	○	○	○

I feel ashamed when I miss an exercise session (10)	○	○	○	○	○
I consider exercise part of my identity (11)	○	○	○	○	○
I take part in exercise because my friends/family/partner say I should (12)	○	○	○	○	○
I think it is important to make the effort to exercise regularly (13)	○	○	○	○	○
I don’t see the point in exercising (14)	○	○	○	○	○
I find exercise a pleasurable activity (15)	○	○	○	○	○
I feel like a failure when I haven’t exercised in a while (16)	○	○	○	○	○

I consider exercise a fundamental part of who I am (17)	○	○	○	○	○
I exercise because others will not be pleased with me if I don’t (18)	○	○	○	○	○
I get restless if I don’t exercise regularly (19)	○	○	○	○	○
I think exercising is a waste of time (20)	○	○	○	○	○
I get pleasure and satisfaction from participating in exercise (21)	○	○	○	○	○
I would feel bad about myself if I was not making time to exercise (22)	○	○	○	○	○
I consider exercise consistent with my values (23)	○	○	○	○	○

I feel under pressure from my friends/family to exercise (24)	○	○	○	○	○

End of Block: BREQ- 3

Start of Block: Godin Leisure Time Exercise Questionnaire

Amount of Exercise in a Typical 7-Day Period

During a typical 7-Day period (a week), how many times on the average do you do the following kinds of exercise for more than 15 minutes during your free time (write on each line the appropriate number).

○ Strenuous Exercise: Heart Beats Rapidly (e.g., running, jogging, hockey, football, soccer, squash, basketball, cross-country skiing, judo, roller skating, vigorous swimming, vigorous biking) (1) _____

○ Moderate Exercise: Not Exhausting (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing) (2) _____

○ Mild Exercise: Minimal Effort (e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking) (3) _____

During a typical 7-Day period (a week), in your leisure time, how often do you engage in any regular activity long enough to work up a sweat (heart beats rapidly)?

- ○ **Often (1)**
- ○ **Sometimes (2)**
- ○ **Rarely (3)**

End of Block: Godin Leisure Time Exercise Questionnaire