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Self-determination and Gender Differences

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Abstract:

Implementing the framework of self-determination theory, the following paper focuses on the benefits of autonomy and the ability that individuals possess over their lives and choices. The term autonomy, which is at the core of self-determination theory, refers to the individual's self- regulation (Ryan & Deci, 2006). This paper also addresses key concepts and current literature that pertains to the theme of autonomy and the role self-determination plays in an individual's health and wellbeing. The following research study used a questionnaire on determinants of organizational citizenship behavior. The study used a convenience sample and participants were collected through the Internet (e.g., email and social media). All participants were 18 or older and were given an informed consent. It is hypothesized that there is a significant difference in self-determination across gender between males (*N*=314) and females (*N*= 597). The independent variable consisted of the participants' gender and the dependent variable was the levels of self-determination reported by the participants in the study. Several variables (e.g., hours worked per week, participants' age, the number of children, income levels) were tested for correlations and interrelation with respect to SDT. The study's findings showed that there is a strong correlation between gender and self-determination theory with respect to autonomy, outcomes of motivation, and wellbeing. The practical implications of these findings are discussed fully with relation to increasing self-determination in the workplace and autonomy.

Keywords **—self-determination, self-regulation, autonomy, gender, wellbeing.**

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I. INTRODUCTION

Throughout history, it has been evident that gender differences exist between male and female individuals either through biology or physiology. However, little information is known on the influence autonomy has on gender differences. Using self-determination theory (SDT), differences between male and female genders will be analyzed and compared to the previous research of autonomy. Self-determination can be viewed as an autonomy-based orientation that embodies individuals' personal choices (Deci & Ryan, 1985). Self-determination is evident in individuals throughout life from childhood to adulthood. The framework of SDT can be viewed and summarized

as an empirically based method that focuses on motivation and development and views autonomy as a central concept (Ryan & Deci, 2006). Previous research on the concept of self-determination focused on creativity, learning, self-esteem, and wellbeing (Deci et al., 1989). Therefore, the following paper examines differences in self-determination across gender between men and women.

Gender differences and self-determination focuses on a variety of different forms that study autonomy and behavior between males and females. According to Ross et al. (2018), autonomy is defined as self-regulated action; individuals are more motivated to perform or maintain changes in behavior when free choice is applied. Healthy

behaviors can be perceived along a continuum. Intrinsic motivation focuses on the inherent enjoyment of a specific activity driven by autonomy, while behaviors that are not inherently enjoyable may still be perceived as autonomously motivated actions known as integrated regulation (Gillison et al., 2019). It is important to note that empowerment refers to increased intrinsic motivation manifested in a set of four cognitive elements that reflect individuals overall roles: competence, impact, meaning and self-determination (Thomas & Velthouse, 1990). More specifically, the self-determination dimension of empowerment focuses on individuals having a sense of choice in regulating and initiating different actions with respect to autonomy (Deci et al., 1989). Whereas introjected motivation addresses actions that are not autonomous, but are run by external forces (Gillison et al., 2019). According to Gillison et al. (2019), taking part in behaviors for more autonomous reasons produces more adaptive health outcomes, which include but are not limited to positive wellbeing, better behavioral adaptation, and maintenance. Self-determination theory identifies three psychological needs that individuals possess. One of these needs is competence, which focuses on attaining a desired outcome (Deci & Ryan, 2004). The second need is autonomy, which focuses on the individual's choices (Deci & Ryan, 2004). Lastly, the third need is relatedness, which focuses on reliance on others and mutual respect (Deci & Ryan, 2004). A meta-analysis study conducted by Ng et al. (2012) used a total of 184 independent data sets that utilized SDT and examined these psychological needs. The main findings suggest that SDT was an acceptable framework for studying motivation in health-related behaviors. Additionally, the same research yielded findings showing that with relation to contextual and personal SDT can be used as a foundation for developing intervention programs within a work related setting.

Moreover, males and females vary to a degree when it comes to self-determination and autonomy. Two primary contributors exist when determining the degree to which a person is self-determined. The first contributor focuses on an individual acting in a self-determined manner, and the second contributor focuses on environmental opportunities and individual autonomy (Wehmeyer & Garner, 2003). Research by Wehmeyer & Garner (2003) examined autonomous functioning and self-determination of 301 intellectually impaired adults of whom 140 participants were males and 161 participants were females. The results of this study concluded that there was no significant difference across gender on any assessments with regards to intellectual disabilities. Nevertheless, individuals with severe intellectual impairment showed less self-determination than their counterparts that either had a mild intellectual impairment or developmental disabilities (Wehmeyer & Garner, 2003).

Self-determination is evident throughout different stages of a person's life from childhood to adulthood. According to Oga-Baldwin & Fryer (2020), self-determination theory examines individual motives in two ways, either through autonomy or control. Even at a young age, autonomy affects an individual's ability to be and stay motivated. Controlled motivation is similar to autonomous motivation in the sense that both concepts consist of two factors. One of these factors is introjected regulation, which closely relates to a feeling of guilt (Oga-Baldwin & Fryer, 2020). The second factor is external regulation, which emphasizes punishment avoidance in order to receive rewards (Oga-Baldwin & Fryer, 2020). For example, gender differences in self-determination are evident in learning a new language. A recent study by Oga-Baldwin & Fryer (2020) explored the motivation of children in elementary schools and learning a new language. The study used 398 elementary school students from Japan, 204 female, and 194 male, ages 10-11. The experiment consisted of two parts: a motivational survey and a vocabulary pre-test. The results of this study indicated that male participants demonstrated low-quality externally controlled motives, whereas female participants showed the opposite, high-

quality internally regulated motives (Oga-Baldwin, 2020). The study's findings suggest that even at a young age, males and females differ when it comes to self-determination.

In addition, there is a strong correlation between gender differences and self-determination during the early years of adolescence. Students' reasons and motives for participating in physical education were examined using SDT. According to Athanasios (2007), types of motivations vary in the degree of self-determination, placing different activities that individuals choose to perform along a self-determination continuum. When it comes to SDT, a continuum exists from extrinsic to intrinsic motivation; individuals that are towards the intrinsic motivation have increased autonomy, whereas extrinsic motivation is connected to rewards (Lauderdale et al., 2015). Research by Athanasios (2007) examined students' self-determination differences between grades and gender during physical education. The study's participants consisted of 1,365 Greek students, 681 males and 704 females; A self-determination questionnaire was used to evaluate the reason behind the students participating in physical activity. The results of this study showed that self-determination for participating in physical activities declined with education and age for both genders. Specifically, the results showed that with regards to SDT, as grade level increased female participants experienced a larger decline in self-determination than male participants.

As individuals get older and become adolescents a number of factors contribute to the difference between gender and autonomy. A significant number of studies demonstrated a relationship between autonomy and factors that contribute to self-determination in youth, family, and school environment (e.g., Zhang, 2005; Deci & Ryan, 2008); however, the magnitude of the relationship across all three factors has not been thoroughly investigated (Cavendish, 2017). Research by Cavendish (2017) assessed roles of disability, gender and race/ethnicity with respect to personal growth and the improvement of self-determination.

The study used 190 diverse, high school students with disabilities, 67% were male and 33% were female, with demographics of 9% Anglo, 62% Latino, 27% Black, and 2% multiracial. The results of this study found that gender and disability were contributors to the level of self-determination while race/ethnicity and age were not. According to Cavendish (2017), female participants reported self-determination scores higher by approximately 10 points than male participants. It is important to understand SDT with relation to adolescent development (Cavendish, 2017). Therefore, family atmosphere in relation to autonomy, relatedness, and competence are more likely to encourage a broader comprehension in the development of self-determined behavior.

Nonetheless, there is still a significant difference across gender between male and female levels of autonomy and motivation. Motives are defined as reasons for doing something, such as physical activities (Guiren et al., 2012). A recent meta-analysis, which examined 27 studies (e.g., Thogersen-Ntoumani & Ntoumanis, 2006; Wilson et al., 2007) on the difference between gender and SDT using research that employed Behavioural Regulations in Exercise Questionnaire, showed that there was no significant difference across gender and levels of self-determination (Guerin et al., 2012). The findings of the same meta-analysis also showed that the level of motivation styles share consistency between males and females. In a similar way, Lauderdale et al. (2015) investigated motivational levels in college students during weekly physical activities. The study used a total of 96 college students, 33 males and 63 females, ages 18 to 24. A motivational regulation questionnaire was given along with a physical activity 8-point response scale test in which subjects indicated the engagement in physical activities per week. The results of this study confirmed that males responded more positively to intrinsic motivation than females. According to Lauderdale et al. (2015), male participants were more betrothed in sports due to internal factors that included benefits that were received from exercise, stimulation, and enjoyment.

Additionally, the same research revealed that lower levels of self-determination were common among college students that were considered inactive as compared to active students.

When it comes to individuals' autonomy, there is a significant difference between gender and self-determination. During adulthood certain types of roles that individuals attain relate to self-determination in different attachment styles. According to Leak & Cooney (2001), individuals have different attachment styles, which are characteristic ways that people use to relate to others. There are four attachment styles: secure, preoccupied, dismissive-avoidant and fearful-avoidant. The secure attachment style consists of having a positive view of one's self and other individuals, while the preoccupied style involves having an unfavorable view of one's self and a favorable view of others (Leak & Cooney, 2001). The dismissive-avoidant style is defined as having an unfavorable view of others while having a favorable view of one's self, conversely, the fearful-avoidant style focuses on a negative view of one's self and others (Leak & Cooney, 2001). A study by Leak & Cooney (2001) used 134 women and 75 men to explore adults' attachment styles, self-determination, and wellbeing. The results of this study showed that self-determination was positively associated with psychological health and wellbeing. Additionally, the same research revealed that fearful-avoidant and preoccupied attachment styles were negatively associated with self-determination. According to Leak & Cooney (2001), when it came to relationships, self-determination was the medium between which attachment styles were influenced by participants' psychological health and wellbeing, including factors that shaped psychological health and wellbeing.

Research on gender differences in autonomy has gathered interest from psychologists and theorists alike with a common goal of interpreting behavior across different cultures in an attempt of understanding individual wellbeing. SDT argues that wellbeing is enhanced when individual psychological needs are supported by the social context (Chirkov et al., 2003). Research by Chirkov et al. (2003) examined relative autonomy across diverse cultures. The study utilized 559 students from four nations; surveys were provided in a standardized format with demographic variables of age, marital status, family income, parents' education, and place of birth. The results of this study showed that behavior and attitudes are autonomously connected with greater wellbeing. According to Chirkov et al. (2003), any issues related to autonomy are of meaningful importance for both genders. Males and females differ in terms of self-determination throughout the lifespan. The individual accumulates those differences throughout life from childhood to adulthood. As previously mentioned, SDT focuses on basic psychological needs, competence, autonomy, and relatedness. However, the model of eudaimonia, influenced by the SDT, emphasizes the concept of living well while focusing on a number of factors that contribute to the satisfaction of basic psychological needs. These basic needs consist of the following: the pursuit of intrinsic motivation, the pursuit of autonomous goals, and acceptance of present experiences (Mackenzie et al., 2018). Therefore, the model of eudaimonia proposes that when individuals satisfy their basic psychological needs, a relationship forms between wellbeing outcomes and motivational constructs (Mackenzie et al., 2018). A recent study by Mackenzie et al. (2018) examined different age groups related to self-determination theory, specifically focusing on the process of living well and the outcomes of that life. The findings of the study showed that old age was positively correlated with living well. Additionally, the findings also showed the age was emphatically connected with life fulfillment, but negatively connected with reason and development. Furthermore, the results indicated positive associations between socio-emotional benefits between aging and wellbeing.

The objective of this study was to explore if a strong correlation exists between gender and self-determination theory concerning motivation,

autonomy, and wellbeing. In this study, the dependent variable was the levels of self-determination (autonomy) reported by the participants while the independent variable consisted of the gender (male or female) of the participants. The general prediction is that male participants will report significantly higher levels of self-determination than female participants.

II. METHODS

A. *Participants*

Participants for this study were recruited using a convenience sampling through the Internet, specifically through email and social media. There were a total of 911 participants. Participants were 18 years or older. There was no compensation given to participants for completing the questionnaire. Anyone under the age of 18 were excluded from the study. The sample was predominantly female 65.5% (N=597) while male participants 34.5% (N=314). The mean age of participants was M=34.72 for females and M=35.85 for males. Participants levels of education were as follows from highest to lowest: 355 participants had a Bachelor's degree approximately 39%, 193 participants had a Master's degree approximately 21.2%, 168 participants had a High school diploma or GED approximately 18.4%, 141 participants had an a Associate degree approximately 15.5%, 40 participants had a Doctorate approximately 4.4% and 14 participants had a less than a high school education approximately 1.5%. Participants' race/ethnicity were as follows from highest to lowest: 632 participants were Hispanic approximately 69.4%, 122 participants were White/non-Hispanic approximately 13.4%, 101 participants were Black/African American approximately 11.1% and 56 participants were Multiracial approximately 6.1%. Participants' level of income were as follows from highest to lowest: 34.8% of participants earned 0-29,999k, 25.1% of participants earned 30,000-49,999k, 17.2% of participants earned 50,000-69,999k, 8% of participants earned 70,000k-99,999k, 5.5% of participants earned 100,000k or more and 9.3% of

participants gave the answer of "prefer not to answer." The number of children that participants had varies: 57.6% of participants had no children; 15.4% of participants had one child; 17.2% of participants had two children; 6.8% of participants had three children and 3% of participants had four or more children.

B. *Procedure*

Before beginning the study, participants were required to complete a consent form, which outlined the purpose of the study, participants' right to withdrawal, and confidentiality. The study used a questionnaire on the determinants of organizational citizenship behavior. Participants were 18 years of age or older. In order to maintain the anonymous nature of the study, surveys did not require participants' names. The individuals' participation in the study was voluntary. Participants had the right to withdraw at any time throughout the study.

Once participants have completed the survey, a "Thank you" message would appear indicating that the survey was submitted successfully. Briefing was not included as part of the survey. However, participants were advised to contact the principal investigator/instructor with research-related questions.

C. *Instrumentation*

The survey was created using an online program named GoogleForms, and was presented to participants through electronic formats. In order to ensure proper comprehension of all survey items, the survey was translated from English to Spanish. All participants in this study were provided links to both, the English and the Spanish version of the survey, to give participants the option to complete the survey in their preferred languages. Demographic data regarding gender, age, ethnic/racial identity, income levels, the number of children and level of education were collected from all participants.

The survey online survey collected additional information regarding independence, self-determination, ability, organizational citizenship behavior, and gender equality in the workplace.

Self-determination was measured through three required-to-answer questions, which included a 5-point Likert scale that ranged from 1=strongly disagree to 5=strongly agree. The three items were developed upon the original work of Spreitzer (1995)'s multidimensional measures of psychological empowerment. The estimated time for the compilation of the online survey was 20 minutes.

III. RESULTS

The main hypothesis for this study stated that there is a significant difference in self-determination across gender between men and women. Although a total of 911 responses were received and collected, 4 responses lacked essential data or did not meet the study's requirements, leaving 907 responses available for analysis.

t-test

The t-test was run to find out if there is a significant difference between gender and hours worked per week. The t-test results (see Table 1) showed that there was a significant difference between gender (M=1.34, SD=0.476) and hours worked per week (M=36, SD=15.26). Column 3 in Table 1 shows that male participants (N=313, M=37.45) on average worked more hours per week than female participants (N=594, M=35.31). Using an a level of 0.05, the p-value of 0.044 suggests that there is a statistically significant difference between gender (male and female) and average hours worked per week.

TABLE 1

Descriptives

Hours worked per week.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Female	594	35.311	15.0340	.6169	34.099	36.522	.0	95.0
Male	313	37.452	15.6134	.8825	35.716	39.189	.0	84.0
Total	907	36.050	15.2618	.5068	35.055	37.044	.0	95.0

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hours worked per week.	Based on Mean	.009	1	905	.925
	Based on Median	.120	1	905	.729
	Based on Median and with adjusted df	.120	1	904.857	.729
	Based on trimmed mean	.028	1	905	.868

ANOVA

Hours worked per week.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	940.043	1	940.043	4.049	.044
Within Groups	210088.724	905	232.142		
Total	211028.767	906			

Chi-square test

The Chi-square test was run to determine if there was a correlation between gender (male and female) and annual income levels (below 70,000k, above 70,000k, prefer not to answer). The Chi-square test results (see table 2) showed a significance (p) value of 0.001, indicating that there is a statistically significant difference between gender and annual income levels. Based on the data, female participants on average earn below 70,000k (77.2%).

TABLE 2

Gender * Annual income levels Crosstabulation

Count

		Annual income levels Below 70,000k	Annual income levels Above 70,000k	Annual income levels Prefer not to answer	Total
Gender	Female	486	59	52	597
	Male	217	64	33	314
Total		703	123	85	911

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.548[a]	2	<.001
Likelihood Ratio	20.705	2	<.001
Linear-by-Linear Association	10.093	1	.001
N of Valid Cases	911		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 29.30.

Additionally, the Chi-square test was used to determine if there was a correlation between the number of children (no children, one or more children) and annual income levels (below 70,000k, above 70,000k, prefer not to answer). The Chi-square test results (see table 3) showed a significance (p) value of 0.001, indicating that there is a statistically significant difference between number of children and annual income levels. Based on the data collected 77.2% of participants earning below 70,000k do not have children.

TABLE 3

Number of children * Annual income levels Crosstabulation

Count

		Annual income levels			
		Below 70,000k	Above 70,000k	Prefer not to answer	Total
Number of children	No children	430	49	46	525
	One or more children	273	74	39	386
Total		703	123	85	911

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.977[a]	2	<.001
Likelihood Ratio	19.762	2	<.001
Linear-by-Linear Association	8.606	1	.003
N of Valid Cases	911		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 36.02.

Correlations

The correlation test was run to find out if there is a correlation between age (M=34.72, SD=12.462) and hours worked per week (M=34, SD=15.26). The correlation test results (see Table 4) showed a statistically significant correlation between age and hours worked per week (p=0.04, a=0.05).

TABLE 4

Correlations

		Hours worked per week.	Age
Hours worked per week.	Pearson Correlation	1	.040
	Sig. (2-tailed)		.234
	N	907	907
Age	Pearson Correlation	.040	1
	Sig. (2-tailed)	.234	
	N	907	911

IV. DISCUSSION

In this paper, we aimed to further the understanding of SDT, defined as motivations that are both controlled and autonomous that drive individuals to immoderate work, therefore relating to positive and negative motivations (Van den Brock et al., 2011). Within SDT, individuals' basic psychological needs are defined as innate and essential for healthy functioning through different desires that can be satisfied by influencing a person's psychological health (Di Domenico & Fournier, 2014). Specifically, the present study

wanted to shed light on the significant difference associated with gender and SDT. Based on the SDT's concepts of autonomy and controlled motivations, we hypothesized that male participants would report higher levels of self-determination than female participants.

The central finding on this study was that male participants reported working on average more hours per week than female participants. Those results are consistent with Lyson & Woodward, (2004) research finding that businessmen report slightly higher average hours worked per week than their female counterparts with respect to autonomy. The workplace environment has been linked to SDT and the degree of freedom individuals have with regard to day-to-day tasks (Sands & Wehmeyer, 1996). According to Allan et al. (2016), individuals who feel more in charge of his or her career dynamic are bounded to have more significant levels of internal regulation and low levels of amotivation; in turn demonstrate when individuals feel autonomy and choice in certain domains they are more likely to be motivated resulting in meaning, satisfaction and prescience in terms of income and time spent on the job.

The second finding of this study was a chi-square test that focused on the correlation between gender and income levels, and was supported by the finding of a statistically significant difference between gender (male, female) and annual income levels (below 70,000k, above 70,000k, prefer not to answer). These findings can be explained by the gender differences between male and female participants with regard to career and occupation levels or life choices. This finding is consistent with a United States Census Bureau, full-time or year-round female workers on average earn $45,097 as compared to male workers that earn $55,291, women (12.9%) have higher rates of poverty as compared to men (10.6%) (U.S. Census Bureau, 2019). Additionally, the chi-square test was used to find the correlation between the number of children and annual income levels, was supported by the finding of statistical significant difference between the number of children (no children, one or more

children) and annual income levels (below 70,000k, above 70,000k, prefer not to answer). These findings can be explained by having no children correlates to having a lower income level as compared to having children. However, this finding was not supported by Black et al. (2013), which stated that societies both that are developed and are developing have fewer children if any when it comes to high-income families compared to low-income families. The same study found that females with higher levels of education had less children as compared to their counterparts (Black et al., 2013).

The last finding of this study was a correlation test used to find a correlation between age and hours worked per week; it was supported by the finding of a statistically significant difference between age and hours worked per week. Similar findings by Van den Brock et al. (2011), showed that individuals work compulsively because they are concerned with rewards and punishments or due to the feeling of shame or guilt if they are not working, therefore undermining their wellbeing with resentment to SDT. It could be concluded that the correlation between age and average hours worked per week reflects the concept of self-determination that focuses on individuals having the right to direct their lives and to fill basic psychological, biological and physiological needs (Schoeller et al., 2003).

V. LIMITATIONS

There are a couple of impediments to this study. The first limitation is gender; the current study had far more female than male participants. The second limitation is convenient sampling, which cannot be used to generalize the general population. The third limitation was race/ethnicity; most of the responses came from Hispanic participants, which do not generalize the general population. The fourth and final limitation is missing/removed; a number of participants were removed due to invalid answers or failing to complete the questionnaire properly.

VI. PRACTICAL IMPLICATIONS

The main application of SDT is autonomy with concern on how organizations can survey and construct a culture of highly motivated individuals (Rigby & Ryan, 2018). A correlation between gender, income levels, and hours worked per week tells employers that changes to a worker's autonomy is more likely to encourage or employ self-determination. If employers are looking to increase the probability of autonomy occurring in the workplace they could include self-determination questions in their screening or provide training and interventions that could improve workplace autonomy. Industrial-organizational (I/O) psychologists looking to increase self-determination in the workplace could look into income levels and hours worked per week, which has been shown to have significant differences in terms of autonomy. The main findings of the current study suggest that there is a significant difference between gender and self-determination, regulation of individual self are no more or less likely to help employers to understand the differences between male and female gender and autonomy further research need to be accomplished in order to understand the breakdown between gender and self-determination. If gender is related to hours worked per week and/or income levels as shown in the t-test and chi-square test, then it is implied that employers would be wise to create a program that addresses gender and pay raises. Further research needs to be performed in order to analyze and understand the differences between gender and self-determination

REFERENCES

[1] Allan, B. A., Autin, K. L., & Duffy, R. D. (2016). Self-Determination and meaningful work: Exploring socioeconomic constraints. *Frontiers in Psychology, 7*, 1–9. https://doi.org/10.3389/fpsyg.2016.00071

[2] Athanasios, K. (2007). Grade and gender differences in students' self-determination for participating in physical education. *Education Sciences and Psychology, 11*(2), 23-30.

[3] Black, D. A., Kolesnikova, N., Sanders, S. G., & Taylor, L. J. (2013). Are children "normal"? *Review of Economics and Statistics, 95*(1), 21–33. https://doi.org/10.1162/rest_a_00257

[4] Cavendish, W. (2016). The role of gender, race/ethnicity, and disability status on the relationship between student perceptions of school and family support and self-determination. *CareerDevelopment and Transition for Exceptional Individuals, 40*(2), 113–122. https://doi.org/10.1177/2165143416629359

[5] Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology, 84*(1), 97–110. https://doi.org/10.1037/0022-3514.84.1.97

[6] Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology, 74*(4), 580-590.

[7] Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality, 19*(2), 109-134. https://doi.org/10.1016/0092-6566(85)90023-6

[8] Deci, E. L., & Ryan, R. M. (2004). *Handbook of self-determination research*. University Rochester Press.

[9] Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology/PsychologieCanadienne, 49*(1), 14–23. https://doi.org/10.1037/0708-5591.49.1.14

[10] Di Domenico, S. I., & Fournier, M. A. (2014b). Socioeconomic status, income inequality, and health complaints: A basic psychological needs perspective. *Social Indicators Research, 119*(3), 1679–1697. https://doi.org/10.1007/s11205-013-0572-8

[11] Gillison, F. B., Rouse, P., Standage, M., Sebire, S. J., & Ryan, R. M. (2019). A meta-analysis of techniques to promote motivation for health behaviour change from a self-determination theory perspective. *Health Psychology Review, 13*(1), 110–130. https://doi.org/10.1080/17437199.2018.1534071

[12] Guérin, E., Bales, E., Sweet, S., & Fortier, M. (2012). A meta-analysis of the influence of gender on self-determination theory's motivational regulations for physical activity. *Canadian Psychology/PsychologieCanadienne, 53*(4), 291–300. https://doi.org/10.1037/a0030215

[13] Lauderdale, M. E., Yli-Piipari, S., Irwin, C. C., & Layne, T. E. (2015). Gender differences regarding motivation for physical activity among college students: A self-determination approach. *Physical Educator, 72*(5), 153–172.

[14] Leak, G. K., & Cooney, R. R. (2001). Self-determination, attachment styles, and well-being in adult romantic relationships. *Representative Research in Social Psychology, 25*, 55–62.

[15] Lyon, D., & Woodward, A. E. (2004). Gender and time at the top. *European Journal ofWomen's Studies, 11*(2), 205–221. https://doi.org/10.1177/1350506804042096

[16] Mackenzie, C. S., Karaoylas, E. C., &Starzyk, K. B. (2018). Lifespan differences in a self-determination theory model of eudaimonia: A cross-sectional survey of younger, middle-aged, and older adults. *Journal of Happiness Studies, 19*(8), 2465–2487. https://doi.org/10.1007/s10902-017-9932-4

[17] Ng, J. Y. Y., Ntoumanis, N., Thøgersen-Ntoumani, C., Deci, E. L., Ryan, R. M., Duda, J. L., & Williams, G. C. (2012). Self-determination theory applied to health contexts: A meta-analysis. Perspectives on Psychological Science, 7(4), 325–340. https://doi.org/10.1177/1745691612447309

[18] Oga-Baldwin, W. L. Q., & Fryer, L. (2020). Girls show better quality motivation to learn languages than boys: Latent profiles and their gender differences. *Heliyon, 6*(5). https://doi.org/10.1016/j.heliyon.2020.e04054

[19] Rigby, C. S., & Ryan, R. M. (2018). Self-determination theory in human resource development: New directions and practical considerations. *Advances in Developing Human Resources, 20*(2), 133–147. https://doi.org/10.1177/1523422318756954

[20] Ross, B. M., & Barnes, D. M. (2018). Self-determination theory with application to employee health settings. *Workplace Health & Safety, 66*(8), 367–372. https://doi.org/10.1177/2165079917749863

[21] Ryan, R. M., &Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality, 74*(6), 1557–1586. https://doi.org/10.1111/j.1467-6494.2006.00420.x

[22] Sands, D. J., &Wehmeyer, M. L. (1996). *Self-determination across the life span: Independence and choice for people with disabilities*. Paul H Brookes Pub Co.

[23] Schoeller, K., Kachgal, M., & Bremer, C. (2003). Self-determination: Supporting successful transition (NCSET Research to Practice Brief).

[24] Spreitzer, G. M. (1995). Psychological, empowerment in the workplace: dimensions, measurement and validation. *Academy of Management Journal, 38*(5), 1442–1465. https://doi.org/10.2307/256865

[25] Thogersen-Ntoumani, C., &Ntoumanis, N. (2006). The role of self-determined motivation in the understanding of exercise-related behaviours, cognitions and physical self-evaluations. *Journal of Sports Sciences, 24*(4), 393–404. https://doi.org/10.1080/02640410500131670

[26] Thomas, K. W., &Velthouse, B. A. (1990). Cognitive elements of empowerment: An "Interpretive" model of intrinsic task motivation. *The Academy of ManagementReview, 15*(4), 666. https://doi.org/10.2307/258687

[27] U.S. Census Bureau. (2019, September 10). *Payday, poverty, and women*. The United States Census Bureau. https://www.census.gov/library/stories/2019/09/payday-poverty-and-women.html#:%7E:text=Women%20continue%20to%20have%20higher%20rates%20of%20poverty%20than%20men.&text=Median%20income%20for%20households%20maintained,5.8%25%20between%202017%20and%202018.

[28]

[29] Van den Broeck, A., Schreurs, B., De Witte, H., Vansteenkiste, M., Germeys, F., &Schaufeli, W. (2011). Understanding workaholics' motivations: A self-determination perspective. *Applied Psychology, 60*(4), 600–621. https://doi.org/10.1111/j.1464-0597.2011.00449.x

[30] Wehmeyer, M. L., & Garner, N. W. (2003). The impact of personal characteristics of people with intellectual and developmental disability on self-determination and autonomous functioning. Journal of Applied Research in Intellectual Disabilities, 16(4), 255–265. https://doi.org/10.1046/j.1468-3148.2003.00161.x

[31] Wilson, P. M., Rodgers, W. M., Loitz, C. C., &Scime, G. (2007). "It's Who I Am … Really!' The importance of integrated regulation in exercise contexts1. *Journal of Applied* Biobehavioral Research, 11(2), 79–104. https://doi.org/10.1111/j.1751-9861.2006.tb00021.x

[32] Zhang, D. (2005). Parent practices in facilitating self-determination skills: The influences of culture, socioeconomic sta- tus, and children's special education status. *Research and* Practice for Persons With Severe Disabilities, 30, 154–162.