

Supplementary Materials

Religiosity Moderates Goal Courage and Self-Worth in Collegiate Christian Athletes

Table of Contents

Comparing Different Sports and Genders on Moral Outcomes.....	2
Study Measures.....	3
Demographic Differences between Athletes and Non-athletes.....	9
Supplementary Analyses.....	10
Supplementary Figures.....	12
Full Jobson Quotation.....	14

Comparing Different Sports and Genders on Moral Outcomes

Comparing Sports

Past studies have found that participation in different sports leads to distinct moral outcomes. On the one hand, results from one study suggested no differences in moral reasoning when comparing different sports (i.e., football, basketball, handball) or years of athletic experience (Proios et al., 2004). On the other hand, however, a longitudinal study found that intercollegiate athletes scored lower on ethical values at the beginning and end of a four-year college career compared with intramural athletes, and that both groups' scores significantly declined over time (Priest et al., 1999). Furthermore, individual sport athletes had higher character than team sport athletes but demonstrated a greater decline over four years (Priest et al., 1999). Results from another study comparing varsity, club, and intramural sports found significant differences between level of competition (i.e., high-contact varsity sports had lower character than club or intramural, and club sport athletes had highest overall levels of character) and sport (i.e., non-contact varsity individual sports had the highest character, and non-contact athletes had higher character than contact sport athletes; Doty & Lumpkin, 2010). Another study found variability across sports in substance use (Ford, 2007). Furthermore, individual sport athletes have been found to score higher than team sport athletes on a social character index (Rudd & Stoll, 2004).

Comparing Genders

In addition, significant gender differences have been found such that females have scored higher in moral reasoning (Beller & Stoll, 1995), ethical values (Priest et al., 1999), social character index (Rudd & Stoll, 2004), general character (Doty & Lumpkin, 2010); deemed rule-violating behavior as less acceptable (Silva, 1983); and engaged in fewer harmful alcohol-related behaviors (Leichliter et al., 1998) compared to males.

Study Measures

Full list of larger longitudinal study measures linked to OSF:
<https://doi.org/10.17605/OSF.IO/H2RQP>

1. 3-Factor Patience Scale (Schnitker, 2012)

Instructions: For each of the statements below, please indicate how much the statement is like/unlike you in the past month.

1 = Not like me at all 2 = Unlike me 3 = Neutral 4 = Like me 5 = Very much like me

1. My friends would say I'm a very patient friend.
2. I am able to wait-out tough times.
3. Although they're annoying, I don't get too upset when stuck in a traffic jam.
4. I am patient with other people.
5. I find it pretty easy to be patient with a difficult life problem or illness.
6. In general waiting in lines does not bother me.
7. I have trouble being patient with my close friends and family.
8. I am patient during life hardships.
9. When someone is having difficulty learning something new, I will be able to help them without getting frustrated or annoyed.
10. I get very annoyed at red lights.
11. I find it easy to be patient with people.

Items 7 and 10 are reverse-scored.

Interpersonal Patience: 1, 4, 7R, 9, 11

Life Hardship Patience: 2, 5, 8

Daily Hassles Patience: 3, 6, 10R

Schnitker, S. (2012). An examination of patience and well-being. *Journal of Positive Psychology*, 7(4), 263–280.

2. Courage (Howard & Alipour, 2014)

Instructions: Please carefully read each statement and rate how often you would have or did behave in that way in the past month.

1 = Never 2 = Almost never 3 = Occasionally 4 = Sometimes 5 = Often 6 = Almost
always 7 = Always

1. I tend to face my fears.
2. Even if I feel terrified, I will stay in the situation until I have done what I need to do.
3. I will do things even though they seem to be dangerous.
4. If I am worried or anxious about something, I will do or face it anyway.
5. If there is an important reason to face something that scares me, I will face it.
6. Even if something scares me, I will not back down.

Howard, M. C. & Alipour, K. K. (2014). Does the courage measure really measure courage? A theoretical and empirical evaluation. *The Journal of Positive Psychology, 9*(5), 449–459. <https://doi.org/10.1080/17439760.2014.910828>

3. The Contingencies of Self-Worth Scale (Crocker et al., 2003)

Instructions: Please respond to each of the following statements about you in the past month. If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

1 = Strongly Disagree 2 = Disagree 3 = Disagree Somewhat 4 = Neutral 5 = Agree
Somewhat 6 = Agree 7 = Strongly Agree

Others' Approval

1. I don't care what other people think of me. (REVERSE)
2. What others think of me has no effect on what I think about myself. (REVERSE)
3. I don't care if other people have a negative opinion about me. (REVERSE)
4. My self-esteem depends on the opinions others hold of me.
5. I can't respect myself if others don't respect me.

Virtue

6. My self-esteem depends on whether or not I follow my moral/ethical principles.
7. My self-esteem would suffer if I did something unethical.
8. I couldn't respect myself if I didn't live up to a moral code.
9. Whenever I follow my moral principles, my sense of self-respect gets a boost.
10. Doing something I know is wrong makes me lose my self-respect.

Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, A. (2003). Contingencies of self-worth in college students: Theory and measurement. *Journal of Personality and Social Psychology, 85*(5), 894–908.

4. Duke Religion Index (DUREL; Koenig & Büssing, 2010)

Instructions: Rate the extent to which the following statements are true of you in the past month.

1 = Definitely not true 2 = Tends not to be true 3 = Unsure 4 = Tends to be true 5 =
Definitely true of me

1. In my life, I experience the presence of the Divine (i.e., God).
2. My religious beliefs are what really lie behind my whole approach to life.
3. I try to carry my religion over into all other dealings in life.

Koenig, H. G., & Büssing, A. (2010). The Duke University Religion Index (DUREL): a five-item measure for use in epidemiological studies. *Religions, 1*(1), 78-85.

5. Goal Pursuit Measure

One way to describe oneself is to consider the purposes or goals that we are seeking in our everyday behavior. We are interested in the things that you typically or characteristically are trying to do. We call these objectives **goals**. No matter what one's age, or stage in life, there are certain goals that motivate us.

Here are some examples of goals:

Trying to be a good role model for others
Trying to develop my spirituality
Trying to help others in need of help
Trying to seek new and exciting experiences
Trying to avoid being noticed by others
Trying to avoid feeling inferior to others
Trying to eat a healthy, nutritious diet

Note that these goals are phrased in terms of what you are "trying" to do, regardless of whether you are actually successful. For example, you might "try to get others to agree with you" without necessarily being successful.

These goals may be fairly broad, such as "trying to make others happy" or more specific "trying to make my partner happy". Also note that the goals can be either positive or negative. That is, they may be about something you typically try to obtain or keep, or things that you typically try to avoid or prevent. For example, you might typically try to obtain attention from others, or you might typically try to avoid calling attention to yourself.

You can see that this way of describing yourself is different from using trait adjectives (friendly, intelligent, honest). We do **not** want you to use trait adjectives. Since you may have never thought of yourself in this way before, think carefully about what we are asking you to do before you write anything down.

We want you to provide us with a list of your goals. Please write down 3 goals in the spaces provided. Please keep your attention focused on yourself. Do not mentally compare the things that you typically do with what other people do. Think of yourself and your purposes alone. Be as honest and as objective as possible. Do not simply give socially desirable goals or goals which you think you "ought" to have.

Take your time with this task; spend some time thinking about your goals before you begin.

I typically try to...

I typically try to...

I typically try to...

The following are items to assess different virtues.

Patience

I remain calm as I pursue the goal, "I typically try to PIPED GOAL TEXT."

I am able to tolerate challenges that come my way while pursuing the goal, "I typically try to PIPED GOAL TEXT."

I am patient in pursuit of the goal, "I typically try to PIPED GOAL TEXT."

I can regulate my emotions in pursuit of the goal, "I typically try to PIPED GOAL TEXT."

When obstacles challenge my pursuit of the goal, "I typically try to PIPED GOAL TEXT," I don't lose my cool.

I do not let my negative feelings control how I act when pursuing the goal, "I typically try to PIPED GOAL TEXT."

Courage

I am courageous in pursuit of this goal, "I typically try to PIPED GOAL TEXT."

I can overcome my anxiety in pursuit of this goal, "I typically try to PIPED GOAL TEXT."

I move beyond my fears to pursue this goal, "I typically try to PIPED GOAL TEXT."

I pursue this goal, "I typically try to PIPED GOAL TEXT," even when it's risky.

I pursue this goal, "I typically try to PIPED GOAL TEXT," despite threats.

Ratchford, J. L., Cazzell, A., & Schnitker, S. A. (in press). The virtue counterbalancing circumplex model: An illustration with patience and courage. *Journal of Positive Psychology*.

Demographic Differences Between Athletes and Non-athletes**Table S1***Chi Square Tests for Demographic Differences between Athletes and Non-athletes*

Demographic Variable	Chi Square
Gender	$\chi^2(4) = 40.08, p < .001$
Year in School	$\chi^2(6) = 3.33, p = .767$
Religious Affiliation	$\chi^2(9) = 33.21, p = .153$
Ethnicity	$\chi^2(5) = 24.38, p < .001$

Supplementary Analyses

Table S2

One-Way MANOVA Statistics

	Wilk's Lambda	<i>F</i>	Partial Eta Squared
Multivariate Test of Athletic Participation	.987	2.26*	.013
Trait Courage		15.74***	.008
Goal Courage		1.73	.001
Trait Patience		0.29	.000
Interpersonal Patience		0.11	.000
Life Hardships Patience		1.04	.001
Daily Hassles Patience		3.46†	.002
Goal Patience		3.49†	.002
Trait Self-Control		1.59	.001
Inhibitory Self-Control		0.49	.000
Initiatory Self-Control		2.22	.001
CSW-Approval		4.99*	.003
CSW-Virtue		0.01	.000

Note. CSW = Contingent Self-Worth.

****p* < .001, ***p* < .01, **p* < .05, †*p* < .07

Table S3

One-Way MANCOVA Statistics

	Wilk's Lambda	<i>F</i>	Partial Eta Squared
Multivariate Test of Athletic Participation	.991	1.62	.009
Trait Courage		8.12**	.004
Goal Courage		0.52	.000
Trait Patience		1.31	.001
Interpersonal Patience		0.60	.000
Life Hardships Patience		0.07	.000
Daily Hassles Patience		4.41*	.002
Goal Patience		0.64	.000
Trait Self-Control		2.60	.001
Inhibitory Self-Control		1.06	.001
Initiatory Self-Control		2.49	.001
CSW-Approval		1.31	.001
CSW-Virtue		0.16	.000
Multivariate Test of Gender	.915	15.97***	.085
Trait Courage		53.51***	.027
Goal Courage		15.70***	.008
Trait Patience		18.95***	.010
Interpersonal Patience		10.00**	.005
Life Hardships Patience		26.26***	.014
Daily Hassles Patience		3.91*	.002
Goal Patience		53.00***	.027
Trait Self-Control		13.15***	.007
Inhibitory Self-Control		9.62**	.005
Initiatory Self-Control		2.75	.001
CSW-Approval		70.90***	.036
CSW-Virtue		0.54	.000

Note. CSW = Contingent Self-Worth.

****p* < .001, ***p* < .01, **p* < .05, †*p* < .07

Table S4
Two-Way MANOVA Statistics

	Wilk's Lambda	F	Partial Eta Squared
Multivariate Test of Athletic Participation	.991	1.56	.009
Trait Courage		7.17**	.004
Goal Courage		0.85	.000
Trait Patience		1.79	.001
Interpersonal Patience		1.28	.001
Life Hardships Patience		0.04	.000
Daily Hassles Patience		4.22*	.002
Goal Patience		0.80	.000
Trait Self-Control		2.42	.001
Inhibitory Self-Control		1.19	.001
Initiatory Self-Control		2.04	.001
CSW-Approval		1.28	.001
CSW-Virtue		0.48	.000
Multivariate Test of Gender	.936	11.72***	.064
Trait Courage		36.28***	.019
Goal Courage		15.97***	.008
Trait Patience		10.32**	.005
Interpersonal Patience		3.16	.002
Life Hardships Patience		18.38***	.010
Daily Hassles Patience		2.99	.002
Goal Patience		43.31***	.022
Trait Self-Control		10.30**	.005
Inhibitory Self-Control		6.16*	.003
Initiatory Self-Control		3.05	.002
CSW-Approval		53.51***	.027
CSW-Virtue		0.26	.000
Multivariate Test of Athl*Gender	.994	1.04	.006
Trait Courage		0.38	.000
Goal Courage		1.27	.001
Trait Patience		1.24	.001
Interpersonal Patience		3.70†	.002
Life Hardships Patience		0.09	.000
Daily Hassles Patience		0.00	.000
Goal Patience		0.31	.000
Trait Self-Control		0.02	.000
Inhibitory Self-Control		0.17	.000
Initiatory Self-Control		0.39	.000
CSW-Approval		0.00	.000
CSW-Virtue		2.52	.001

Note. CSW = Contingent Self-Worth, Athl*Gender = the interaction term

*** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .07$

Supplementary Figures

Figure S1

Religiosity Moderates Sports' Effect on Goal Courage

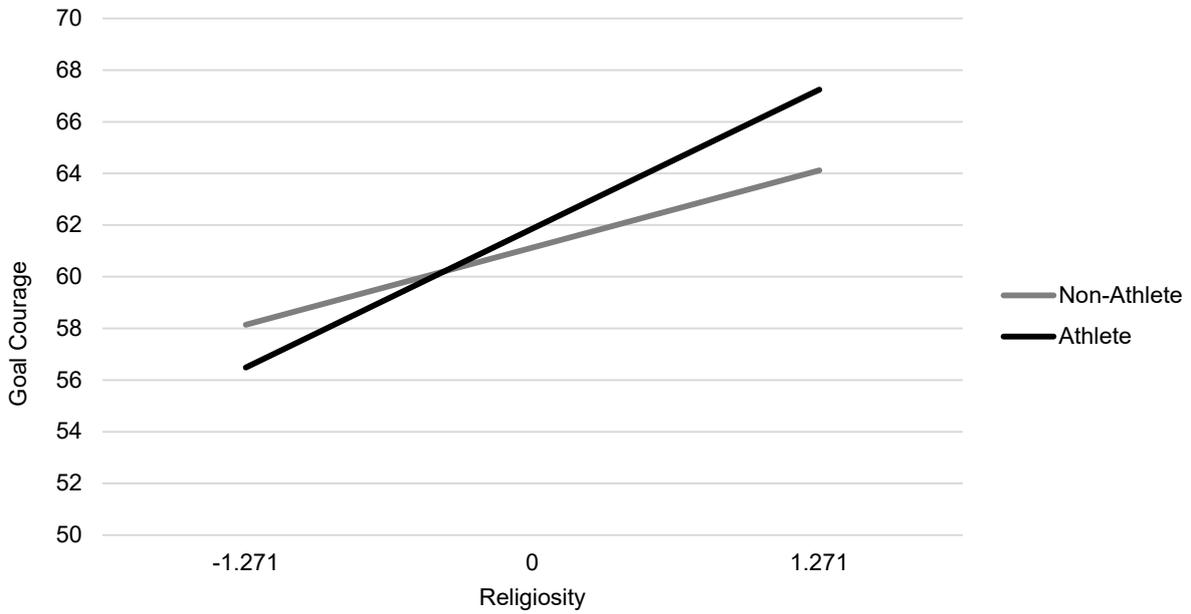


Figure S2

Religiosity Moderates Sports' Effect on Approval Self-Worth

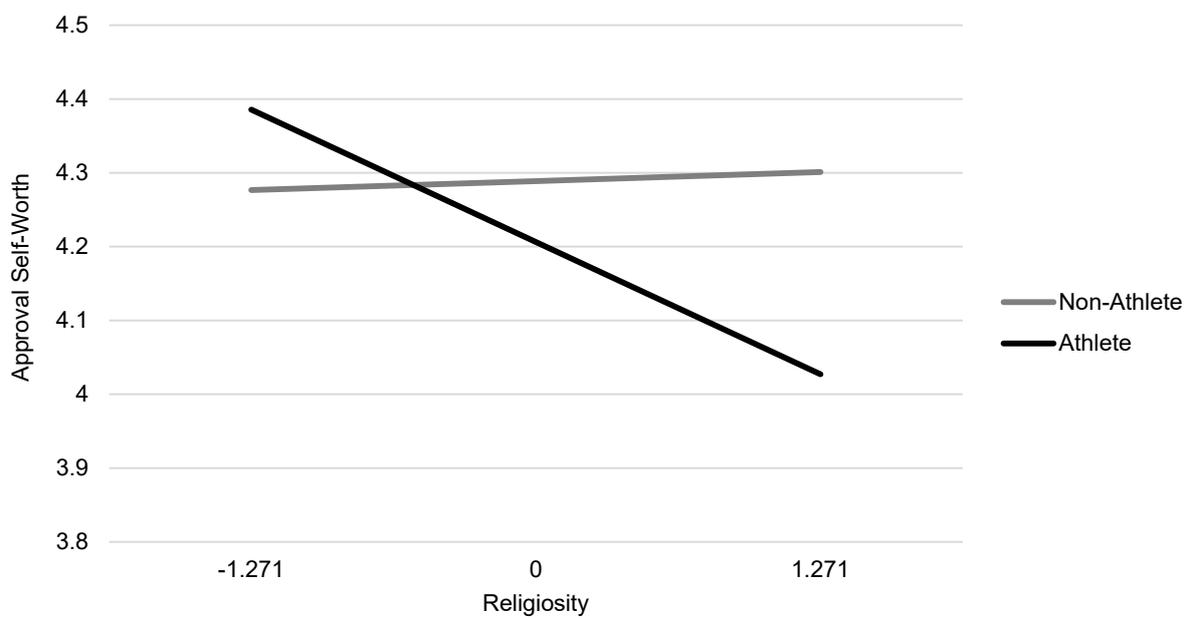
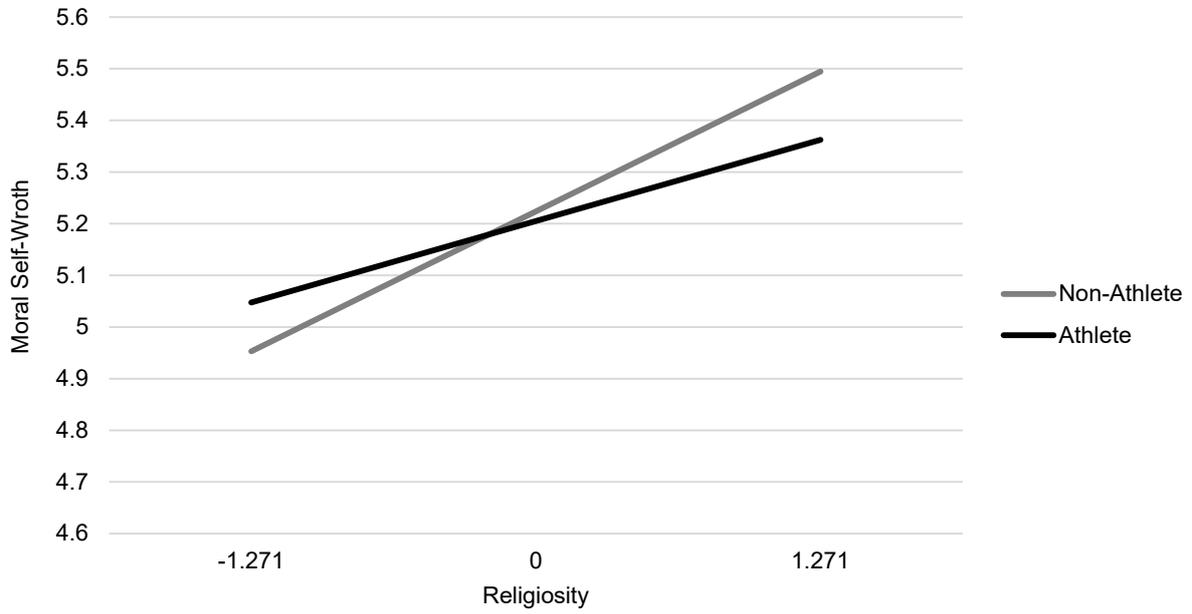


Figure S3
Religiosity Moderates Sports' Effect on Moral Self-Worth



Full Jobson Quotation

I'm going to take you back to when I was a player on the national team. I'd walk out, and the ball would be at my feet, and I'd be ready to start, and, instantly, as the youngest of eight children, I'd be swept over with fear. I'd be anxious. I didn't know if I was good enough. I didn't know if I could meet up to the expectations of being as good as my family members. I had such successful family members; I didn't know if I could hold up to that. And I'd walk out onto the soccer field, and I'd see Abby Wambach, my opponent who I've got to play against, and she's bigger than me and stronger than me. And, instantly, my mind goes to a place of, *I'm not good enough, I'm not strong enough, I can't do this*. That's where my mind would go. But that is the beauty of God's Word. Instantly, the ball at my feet, I could say, *God help me, I need you, I'm afraid, I'm anxious, I want to invite you into this game here right now...* And I could feel in those moments courage rise up in me, so that I could face a hard challenge. And I became brave.

Jobson, M. (2021, March 23). *Integrating God in your game as a player and coach* [Sermon]. Sports Ministry Chapel, George W. Truett Theological Seminary, Baylor University, Waco, TX.