

Religiosity-Work Ethics Relationship and Protestant-Islamic Work ethics similarities in Iranian Students

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The purpose of the present study was to examine the religiosity-work ethics relationship and PWE-IWE similarities in a sample of Iranian university students. The participants consisted of 694 students (582 females and 112 male) who voluntarily participated in the study, and completed the religiosity subscale of the Social Axioms Survey, the Multidimensional Protestant Work Ethic Profile, and Ali's Islamic Work Ethics Questionnaire. Several principal component analyses on both PWE and IWE items separately for students with high and low religiosity scores revealed that the factor structures and loadings were relatively similar; indicating that regardless of the level of religiosity, there probably is a common work ethic (CWE) construct instead of two separate religious based constructs of PWE and IWE. To test this probability, an exploratory factor analysis was conducted on all items of PWE and IWE (CWE) with all participants. An examination of the variance accounted for by a six-factor solution explained approximately 41.89% of variance. Using t-tests of mean differences between low and high religiosity groups regarding CWE factors were examined, indicating that although the means were very close to each other, the differences still remained statistically significant due to the high sample size. Finally, several regression analyses were conducted to examine the role of religiosity in prediction of each of the six CWE factors (Work conditions and values, hard work, centrality of work, self-reliance, leisure, and morality), controlling

for demographic (age, gender, father's and mother's education, family social and economic statuses) variables. Results showed that there is a weak relationship between religiosity and work ethics. In sum, it appears that work ethic is more a culture-based construct than do religion based.

Keywords: islamic work ethics, protestant work ethics, religiosity

Work ethic is generally conceptualized as a “commitment to the value and importance of hard work” (Miller, Woehr, & Hudspeth, 2002, p. 452). Historically, work ethic as a scientific term initially has been considered in western literature and goes back to Max Weber's work of *Protestant Ethic and Spirit of Capitalism*. Weber (1905) believed that radical development of capitalism and its following industrialization was related to the puritan values that emphasis on asceticism and that work is calling from God and economic achievement is a sign of God grace (Woehr Archinega & Lim, 2007; Isonio and Garza, 1987; Giacalone & Jurkiewicz, 2010, Mirrels & Garrett, 1971). Based on weber's thesis, Protestantism with emphasizing on sprit of capitalism was a thinking school that belonged only to Western Europe and North American countries (Arslan, 2000; 2001). Beit-Hallahmi (1979) defines protestant work ethic or PWE as “an orientation toward work which emphasizes dedication to hard work, deferment of immediate rewards, conservation of resources, the saving of surplus wealth, and the avoidance of idleness and waste in any form” (p. 263). Initial theorizing and research regarding to work ethic mostly had a focus on protestant work ethic and western contexts (e.g. Segalman, 1968; Weber, 1958; Mirels, & Garrett, 1971; MacDonald, 1972; Poulton & Ng, 1988).

Recent work regarding to the work ethic, however, found that work ethic is not isolated to western contexts, nor is Protestantism the only influence on work ethics (Ali, 1988; Murtaza, Abbas, Raja, Roques, Khalid & Mushtaq; 2016; Al-Smadi et. al., 2021;

Riaz, 2020). Aldulaimi (2016), for example, noted that a work ethic for Muslims, or the “Islamic Work Ethic” (IWE) is grounded in relationships between people and their creator, and that Islamic ethics are relevant to Muslims in the workplace as Islam is a code for living and being in all areas of an individual’s existence. By definition “The IWE is an orientation that shapes and influences the involvement and participation of the believers in the workplace” (Ali & Al-Owaihan, 2008, p. 10). IWE has rooted in Holy Quran (the saint book of Muslims) and Prophet Mohammad sayings, behaviours and generally his life style that called in Muslims’ culture as Sunnah (Yousef, 2000; 2001; Murtaza et. al., 2016). In Islamic countries including Iran the Muslims’ beliefs, behaviors, values, attitudes, decision making, and so on regarding life, generally, and work, specifically, all are under the influence of Islamic teachings. The way of prophet and latter imams for life and work is very important for those who believe in Islam and they are very interested to have a life style as same as Holy Quran’s obligations, Prophet Mohammad and later Imams. Prophet Mohammad and later Imams in their sayings (in Arabic language called Hadith) always have emphasized on Halal trade and occupation that their meaning was doing trade and work with hard working, having commitment, considering fairness, justice, transparency and so on. For example, Prophet Mohammad said “worship have ten components and nine of them is hardworking and diligence for earning halal money” (Mostadrak Al Vasaal, Vol. 13, p. 12), or “Oh God please give me and my followers the blessing of vitality, and diligence, and protect us against weakness, laziness, disability, making excuse for not working, dejection, distress and disappointment”.

PWE and IWE Similarities

One important debate in the work ethics literature goes back to the shared contents of both IWE and PWE in their definitions and underlying values and beliefs. Although it seems that PWE is a secular work ethic and IWE is a non-secular one (Khorshid, 2016), but some research investigations showed that there is a strong relationship between these two kinds of work ethics. There are some reasons for this claim. First Cross-cultural research revealed that people from non-western countries such as Islamic countries got higher scores on PWE than those who were from western countries (Zulfikar, 2012; Arslan, 2000; 2001; Uygur, 2009). Second, Uygur (2009) with a focus on work ethic studies argued that the underlying principles of different religions, including the Islam and Protestantism that are bases for IWE and PWE, are quite similar. For example, Khorshid (2016) stated that main religions of Judaism, Islam and Christianity known as Abrahamic religions have same origin and are very similar. Quddus, Bailey, and White (2014) stated that dealing with bribery, cheating and fraud, discrimination and injustice, and failure to pay those hired as abhorrent behaviors are common in all three faiths.

Some researchers showed that IWE and PWE have very similar underlying beliefs and values (Kalemci & Tuzun, 2017). There is an exception so that contrary to Protestantism, Islam places a great emphasis on intention not result. Similarly, although the cooperation in work is important for both PWE and IWE, IWE puts emphasis on cooperation not individual achievements and on the goodness of community (Shirokanova, 2015).

Table 1

Underlying Beliefs and Values of IWE and PWE

IWE (Yousef, 2001, p. 153)	PWE (Arslan, 1999, p. 13)
hard work	taking hard work and industriousness as religious duties
Sufficient effort should go into one's work	
Life without work has no meaning and engagement in economic activities is an obligation.	a negative attitude to leisure activities
encouraging people to acquire skills and technology	frugality and productivity
an equitable and fair distribution of wealth in the society	punctuality and time saving
Avoiding laziness and waste of time by either remaining idle or engaging oneself in unproductive activity	pride in work
Emphasis on cooperation in work, and consultation is seen as a way of overcoming obstacles and avoiding mistakes	commitment and loyalty to occupation and organization
highly praises those who strive in order to earn a living	need for achievement
honesty and justice in occupation and trade	honesty
dedication to work as a virtue	taking idleness, wasting time and money as vices
creative work as a source of happiness and accomplishment	internal locus of control (one first must blame himself or herself instead of others)
work is considered to be a source of independence and a means of fostering personal growth, self-respect, satisfaction and self-fulfillment	taking ambition and success as the signs of God's favor
an equitable and fair distribution of wealth in society	taking poverty as a universal indicator of sin while taking wealth as a sign of God's favour

In a more recent and direct study for comparison of IWE and PWE, Kalemci and Tuzun (2017) examined 109 articles in a

content analysis approach to conceptualizations of PWE and IWE. Their conclusion was that there are both shared and unique aspects of PWE and IWE.

Kalemci and Tuzun (2017), based on the existence of names of different cultures in PWE related articles (e.g., American, African, Muslim, and Confucian), consistent with other researchers concluded that the notion of PWE values are shared universally, regardless of religious orientation, and that PWE should be considered a work ethic itself and evaluated as independent from its sociopolitical and religious infrastructure (Ray 1982; Furnham, 1990; Niles 1999; Arslan 2001).

The third reason for the similarity between IWE and PWE is that some researcher (e. g. Shirokanova, 2015; Chanzanagh and Akbarnejad, 2011) have argued that the definition of the other work ethics such as IWE has been under the influence of PWE definition.

Work ethics and religiosity

Another debate in the work ethics literature is that how religiosity and work ethics are connected with each other and that if IWE and PWE are religiously based or culturally based constructs (Giorgi & Marsh, 1990; Chanzanagh & Akbarnejad, 2011). There are contradicted results in the literature, so that some research found an inconsequential relationship (Makiriyado, 2012), and some found moderate to high relationships (Jones, Furnham & Deile, 2010; Walker, Smither & DeBode, 2012; Kennedy & Lawton, 1998) between religion orientation and PWE. Theoretically, Weber in his seminal work on work ethics argued that PWE is based on Protestantism and should be related to religiosity (Weber, 1958). However later work discussed that PWE is secular to Protestantism (Miller et al., 2002). Miller et al.

(2002) argued that secularity is not necessarily connecting to a religion is an important characteristic of PWE. Ray (1982) concluded that all religious orientations share currently to the same degree the attributes associated with the work ethic. He states that the Protestant ethic “is certainly not yet dead; it is just no longer Protestant” (p. 135).

The same rationale indicates that PWE-religiosity relationship could bring about the association between IWE and religiosity. Ali (1988) stated that Quran and Sunnah (sayings and behaviors of the prophet) are two main sources that IWE codes have been derived and then there should be an association between religiosity and IWE. Several studies have been examined the work ethics-religiosity relationship in Iranian samples (Ghorbani, Watson, Karimpour, & Chen, 2017; Haghigatian & Salehi, 2014; Serajzadeh & Rahimi, 2015), all of which operationalized work ethics as PWE, not IWE.

Present study

The purpose of the present study was to investigate the similarities of PWE and IWE as the two main work ethics constructs, and the work ethics-religiosity relationship in Iranian students. This purpose has been investigated in three ways. First, the factor structure of PWE and IWE constructs was examined separately for both the high and the low religiosity groups (based on median split). Second, the mean differences between the high and the low religiosity groups scores on the work ethics dimensions were tested. Finally, to more explore the work ethics-religiosity relationship, the work ethics dimensions were predicted by two sets of socio-economic and beliefs variables.

Method

Participants: The participants consisted of 694 students (582 females and 112 males), voluntarily participated in the study, were from several Iranian universities (including: Shahid Chamran University of Ahvaz, Khalij-e-Fars university of Boushehr, Boujnord, Lorestan, Shahrekord, Isfahan, Ganjnameh, and Alvand), and had different grades (%87.50 undergraduate and %12.50 postgraduate). The mean and standard deviation of participants' age were 22.44 and 5.30 with the minimum and maximum age of 18 and 54, respectively. The participants were from different ethnicity including Fars (%55.30), Lor (%26.20), Arab (%7.50), Turk (%5.90), Kord (%3.30), and others (%1.70). Approximately %96 was Muslim and %4 stated that believe in no religion.

Instruments

Before describing the measures, it should be noted that all three measures were translated into Farsi and a multi-stage translation-back translation procedure was conducted by two psychologists and two English literature professors, all fluent in both Farsi and English.

Multidimensional Work Ethic Profile (MWEP)

The 65-item multidimensional Work Ethic Profile (MWEP) developed by Miller et al. (2002) was used to assess protestant work ethic (PWE). Miller et al. (2002) based on previous PWE scales and original work of Weber regarding protestant work ethic, conceptualized PWE as a construct with seven dimensions: *Centrality of Work, Self-reliance, Hard Work, Leisure, Morality/ethics, Delay of Gratification, and Wasted Time*. This scale measures these seven dimensions of work ethic with 10 items for each dimension except for the delay of gratification (7-

items), and wasted time (8-items). Responses to each item were made on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Miller et. al. (2002) examined the psychometric properties of the scale in six studies, using both student and non-student samples. Specifically, they found significant relationships between MWEP subscales with. test-retest reliability with a four-weeks lag. Estimates for the subscales were Hard Work (.92), Self-Reliance (.92), Leisure (.93), Centrality of Work (.92), Morality/Ethics (.92), Delay of Gratification (.83), and Waste Time (.95). Confirmatory factor analysis showed that the seven-factor model of PWE is fitted with the data in a sample of undergraduate students. Moreover, the correlation of MWEP subscales to personality characteristics, consistent with expectations showed that the mean correlation between the seven work ethic dimension scores (.28) is larger than the mean correlation of the work ethic scores with the personality variables (.10), the manifest needs variables (.15), and cognitive ability (.03). In addition, as predicted, the work ethic dimension scores were related significantly to both conscientiousness (mean $r = .34$) and need for achievement (mean $r = .29$).

In the present research the back-translation method has been employed in order to form the Farsi version of MWEP.

Islamic Work Ethic Scale

The unidimensional 46-item Islamic Work Ethic Scale developed by Ali (1988) was used to measure the Islamic work ethic (IWE). Ali (1988) reported the alpha coefficient of .89 and significant item-total correlations as reliability indices of the scale. This is the only scale that in all previous studies (e. g. Khorshid, 2016; Ali, 1988, 1992; Ali & Azim, 1994; Ali & Al-Kazemi, 2007; Yousef, 2000, 2001) has been used to measure the

IWE. There is an exception. Chanzanagh and Akbarnejad (2011) based on Islamic texts and interviews with teachers of Qom's Islamic school (one of the most important centers of Islamic teachings in Iran and in the world as well) developed a six dimensions IWE scale with 16 items, but not reported the items in their article. As Khorshid (2016) argued IWE is more likely a multidimensional construct because of its dual sources of Quran and Sunnah. By exploratory factor analyzing the 45 items of Ali's IWE scale, he extracted four factors including Work and Society, Justice, Self-Motivation and Work Principles with 6 items measuring each dimension. The correlations between these dimensions were ranged from .45 to .64, indicated the good convergent validity of the scale. Both fitted exploratory and confirmatory factor analyses supported the construct validity of the scale. Khorshid (2016) reported that Cronbach's alpha of the four factors of IWE was .769, .769, .696, and .738, respectively, while it was .905 for the summated IWE scale and .90 for the IWE scale in a pilot study.

Social Axioms Survey (Religiosity Subscale)

The 12-item version religiosity subscale of the Social Axiom Survey developed by Leung et al. (2002) was used to measure religiosity. The Religiosity subscale contains items regarding belief in the existence of supernatural forces (e.g. there is a supreme being controlling the universe), and in the positive consequences of religious practices (e.g. belief in a religion makes people good citizens). Validity and reliability of the subscale have been supported in previous studies (e.g. Leung et al., 2002). Safdar, Lewis, and Daneshpour (2006) after removal of two items with low factor loadings or low item-total correlation, reported the alpha coefficient of this subscale in three

samples of Iranians, Iranian-Canadian, and Canadian as .70, .80, and .73, respectively. Moreover, all items of religiosity loaded cleanly on one factor, indicating the validity of the scale.

Results

Three sets of analyses were conducted to indicate the relationship between religiosity and work ethics. First, several exploratory factor analyses were done to examine the similarities between factor structures of IWE and PWE in two groups of students with low and high religiosity scores. Second, several t-tests were done to indicate the mean differences between low and high religiosity groups regarding dimensions of work ethics. Finally, several hierarchical regression analyses were conducted to predict each dimension of work ethics based on religiosity, controlling for demographic variables. Demographic factors were controlled due to the effect of these variables on work ethics in previous research.

Exploratory factor analyses. To investigate the relationship between religiosity and work ethics first exploratory factor analyses were conducted on PWE and IWE items separately for those students who were high (n= 347) and low (n= 347) on religiosity (based on median split). An examination of the variance accounted for by five factor solution and scree plot of PWE items showed that the five-factor solution was the best compared to 4, 6, and 7 factor solutions in both high and low religiosity samples. This five-factor solution explained approximately %45 and %42 of variance for samples with low and high religiosity scores, respectively. Following Miller et al. (2002) and based on items content for each factor, the factors were labelled as follow: Hard work, centrality of work, self-reliance, leisure, and ethic/morality. Table 2 shows factor

loadings and alpha coefficients separately for low and high religiosity samples.

Table 2
Factor Loadings and Alpha Coefficients of PWE Factor Analysis for Low and High Religiosity Samples

Items	Hard work	Centrality of work	Self- reliance	leisure	Ethics/ mortality
Working hard is the key to being successful.	.78 (.756)				
If you work hard you will succeed.	.733 (.674)				
Anyone who is able and willing to work hard has a good chance of succeeding.	.718 (.657)				
Nothing is impossible if you work hard enough.	.710 (.565)				
If one works hard enough, one is likely to make a good life for oneself.	.703 (.76)				
By simply working hard enough, one can achieve one's goals.	.702 (.70)				
Hard work makes one a better person.	.615 (.696)				
Even if I were financially able, I would not stop working.		.647 (.593)			
I feel uneasy when there is little work for me to do.		.628			(.57)
I experience a sense of fulfillment from working.		.613 (.562)			

A hard day work is very fulfilling.	.607 (.635)	
Life without work would be very boring.	.588 (.608)	
I feel content when I have spent the day working.	.572 (.55)	
A hard day work provides a sense of accomplishment.	.568 (.53)	
It is very important for me to always be able to work.	.537 (.467)	
One should live one's own life independent of others as much as possible.	.663 (.65)	
People would be better off if they depended on themselves.	.610 (.59)	
It is important to control one's destiny by not being dependent on others.	.602 (.63)	
To be truly successful, a person should be self-reliant.	.570 (.66)	
Having a great deal of independence from others is very important to me.	.564 (.638)	
I strive to be self-reliant.	.480 (.447)	
I would prefer a job that allowed me to have more leisure time.	.743 (.688)	
The job that provides the most leisure time is the job for me.	.742 (.727)	

The less time one spends working and the more leisure time one has, the better.	.736 (.634)
Life would be more meaningful if we had more leisure time.	.732 (.611)
People should have more leisure time to spend in relaxation.	.727 (.682)
The more time I can spend in leisure activity, the better I feel.	.705 (.652)
More leisure time is good for people.	.684 (.62)
The world would be a better place if people spent more time relaxing.	.627 (.504)
Leisure time activities are more interesting than work.	.620 (.692)
Stealing is all right as long as you don't get caught.	.652 (.586)
There are times when stealing is justified.	.614 (.594)
I would take items from work if I felt I was not getting paid enough.	.550 (.535)
One should always take responsibility for one's actions.	.449 (-)
People should be fair in their dealings with others.	-.48
It is important to treat others as you would like to be treated.	-.43

Alpha coefficient (after deleting	.89			.89	
items with negative factor	(.88)	.85 (.80)	.79 (.80)	(.84)	.68 (.60)
loading)					

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Factor loadings and alpha coefficients for low and high religiosity are outside and inside of parentheses, respectively.

Table 2 shows that all items loaded on same factor for low and high religiosity student groups, except for three items of “*One should always take responsibility for one’s actions.*”, “*People should be fair in their dealings with others.*”, and “*It is important to treat others as you would like to be treated.*”; indicating that the factor structure of PWE is very similar in both groups and meaning that there is a low relationship between PWE and religiosity. Three items (with factor loadings on the same factor for both groups) were eliminated because of negative factor loadings. Alpha coefficients for low and high religiosity groups also are very similar.

Table 3
Factor Loadings and Alpha Coefficients for IWE Items for
Low and High Religiosity Samples

Items	IWE1	IWE2	IWE 3	IWE 4	IWE 5
Fair competition to improve quality should be encouraged and rewarded.	.687 (.452)				
Good human relations in organizations should be emphasized and encouraged	.643 (.505)				
Employees should carry work out of the best of their ability	.631 (.418)				
Good work benefits both one's self and others	.603 (.502)				
Work should be done with sufficient effort to get the job done	.599		(.647)		
Our society would have fewer problems if each person was committed to his/her work	.582		(.676)		
Every person should strive to achieve better results at work.	.560 (.503)				
Commitment to work values and ambitions for improvement help people to be more successful	.558			(.50)	
A person should participate in economic activities.	.551			(.497)	
Exploitation of power and resources in work is not praiseworthy.	.512 (.696)				
A person should be given a fair wage for their work.	.482 (.628)				
Work is an obligatory activity for every capable individual	.470 (.411)				
Creative work is a source of happiness and accomplishment	.452 (.435)				

Laziness and not working decrease the value of a person	.450 (.70)	
Money earned through bribery and embezzlement is harmful to the society	-(.614)	
A person should constantly work hard to get the job done	.705 (.566)	
Self-reliance enables one to be successful at work.	.668 (.57)	
A person can overcome difficulties in life by doing his/her job well	.656 (.65)	
Any person who works is more likely to be successful in life	.604 (.626)	
Work is a source of satisfaction or self-fulfillment	.60 (.662)	
Work is a source of self- respect	.592 (.62)	
Those who do not work hard often fail in life	.575 (.525)	
Work gives a person the chance to be independent	.535 (.497)	
Cooperation is a virtue in work	(.444)	.739
Cooperation provides satisfaction and benefits society	.65 (.42)	
Justice and generosity in the workplace are necessary conditions for society's welfare	.584 (.60)	
Consultation allows one to overcome obstacles and avoid mistakes	.514 (.47)	
The value of work is derived from the accompanying intention, rather than its results.	.48 (.526)	
Devotion to quality work is virtue	(.496)	.464
Carelessness at work upsets the balance of life.	(.614)	.432

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Work is not an end in itself, but a means to foster personal growth and social relations.						-(.496)
A person should take community affairs into consideration in his/her work						-(.494)
Life has no meaning if people only work for the sake of working.						-(.457)
A person should spend most of his time working						.632 (.446)
Producing more than enough to meet one's personal needs contributes to the prosperity of society as a whole						.604 (.563)
Dedication to work is a virtue.						.595 (.472)
Giving more time for rest and break harms society						.754 (.75)
Too much leisure time is bad for individuals and society						.734 (.74)
Alpha coefficient	.89 (.91)	.86 (.84)	.79 (.72)	.64 (.67)	.64 (.73)	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Factor loadings and alpha coefficients for low and high religiosity are outside and inside of parentheses, respectively.

Same factor analysis was conducted on IWE items and results are presented in Table 3. An examination of the variance accounted for by the five-factor solution and scree plot of IWE items showed that the five-factor solution was the best compared to 4, 6, and 7 factor solutions in both high and low religiosity samples. This five-factor solution explained approximately %46.58 and %50.13 of variance for groups with low and high religiosity scores, respectively. The results showed that from IWE1, IWE2, IWE4,

and IWE5 10 items (%67), 8 items (%100), 3 items (%100), and 2 items (%100), respectively, loaded on the same factor for two groups. None of items of CWE3 loaded on the same factor for the two groups. One item “*A successful employee is the one who meets deadlines at work*” loaded on none of the extracted factors. In sum of all 38 IWE items, 26 items (%61) loaded on the same factor for two groups of students, indicating that factor structures of IWE of two groups are relatively similar.

Because of very similar factor structures of both PWE and IWE in two groups of high and low religiosity, an exploratory factor analysis was conducted on all items of both PWE and IWE (we call after that CWE as the common work ethics) separately for both groups. An examination of the variance accounted for by the six-factor solution and scree plot of CWE items showed that the six-factor solution was the best compared to 5 and 7 factor solutions in both high and low religiosity samples. This six-factor solution explained approximately %41.89 and %41.24 of variance for groups with low and high religiosity scores, respectively. The results showed that among 83 items with factor loading greater than .40, 50 items loaded on the same factor for both high and low religiosity groups. The results are not reported here in detail due to the saving of space.

Previous factor analyses showed that both PWE and IWE constructs follow a common factor structure for both high and low religiosity groups, meaning that there is probably a single work ethic construct regardless of the level of religiosity. To test this probability an exploratory factor analysis was done on all items of PWE and IWE (CWE) with all the participants. Results are presented in Table 4. An examination of the variance accounted for by six factor solution and scree plot of CWE items showed that the six-factor solution was the best compared to 5 and 7 factor

solutions and this six-factor solution explained approximately %41.89 of variance.

Table 4
Factor Loadings and Alpha Coefficients for CWE Items

Items	Work condition and values	Hard work	Centrality of work	Self-reliance	Leisure	Morality
IWE36. Every person should strive to achieve better results at work.	.711					
IWE41. Employees should carry work out of the best of their ability	.681					
IWE34. Cooperation is a virtue in work	.679					
IWE43. Good human relations in organizations should be emphasized and encouraged	.669					
IWE33. Cooperation provides satisfaction and benefits society	.668					
IWE4. Good work benefits both one's self and others	.644					
IWE27. Laziness and not working decrease the value of a person	.633					
IWE30. A person should be given a fair wage for their work.	.629					
IWE37. Fair competition to improve quality should be encouraged and rewarded.	.623					
IWE32. Consultation allows one to overcome obstacles and avoid mistakes	.617					

IWE3. Work should be done with sufficient effort to get the job done	.595
IWE28. Carelessness at work upsets the balance of life.	.589
IWE31. Justice and generosity in the workplace are necessary conditions for society's welfare	.585
IWE2. Our society would have fewer problems if each person was committed to his/her work	.545
IWE15.A person should constantly work hard to get the job done	.543
IWE26. Exploitation of power and resources in work is not praiseworthy.	.543
IWE5. Creative work is a source of happiness and accomplishment	.539
IWE23.Devotion to quality work is virtue	.518
IWE39. A person should participate in economic activities.	.510
IWE17. Work is a source of satisfaction or self-fulfillment	.510
IWE38. Commitment to work values and ambitions for improvement help people to be more successful	.489
IWE25. Money earned through bribery and embezzlement is harmful to society.	.476

IWE20.A successful employee is the one who meets deadlines at work	.463	
IWE1. A person should take community affairs into consideration in his/her work	.456	
IWE7. Life has no meaning without working	.454	
PWE61. People should be fair in their dealings with others.	.423	
IWE12. Work is a source of self- respect	.401	
PWE20. Working hard is the key to being successful.		.757
PWE22. If one works hard enough, one is likely to make a good life for oneself.		.690
PWE45. If you work hard you will succeed.		.659
PWE17. Nothing is impossible if you work hard enough.		.650
PWE47. Anyone who is able and willing to work hard has a good chance of succeeding.		.638
PWE60. By simply working hard enough, one can achieve one's goals.		.632
PWE24. Hard work makes one a better person.		.624
PWE19. Things that you have to wait for are the most worthwhile.		.597

PWE46. The best things in life are those you have to wait for.	.587
PWE21. Self-reliance is the key to being successful.	.544
PWE11. I get more fulfillment from items I had to wait for.	.508
IWE11. A person can overcome difficulties in life by doing his/her job well	.490
IWE14. Those who do not work hard often fail in life	.458
IWE10. Any person who works is more likely to be successful in life	.410
PWE10. Even if I were financially able, I would not stop working.	.624
PWE13. A hard days work is very fulfilling.	.594
PWE4. I feel content when I have spent the day working.	.574
PWE2. I feel uneasy when there is little work for me to do.	.521
PWE9. Time should not be wasted, it should be used efficiently.	.519
PWE1. It is important to stay busy at work and not waste time.	.512
PWE41. Life without work would be very boring.	.506
IWE24. Work is a virtue when it meets the needs of people	.490

PWE52. I experience a sense of fulfillment from working.	.439	
PWE12. I schedule my day in advance to avoid wasting time.	.438	
PWE30. It is very important for me to always be able to work.	.420	
PWE64. A hard days work provides a sense of accomplishment.	.413	
PWE 6. To be truly successful, a person should be self-reliant.		.647
PWE28. One should live one's own life independent of others as much as possible.		.646
PWE50. Having a great deal of independence from others is very important to me.		.600
PWE26. People would be better off if they depended on themselves.		.593
PWE59. It is important to control one's destiny by not being dependent on others.		.588
IWE13. Work gives a person the chance to be independent		.498
IWE16. Self-reliance enables one to be successful at work.		.492
PWE44. I strive to be self-reliant.		.466
PWE58. People should have more leisure time to spend in relaxation.		.735

PWE49. The job that provides the most leisure time is the job for me.						.724
PWE18. The less time one spends working and the more leisure time one has, the better.						.687
PWE14. The more time I can spend in a leisure activity, the better I feel.						.677
PWE8. I would prefer a job that allowed me to have more leisure time.						.672
PWE31. More leisure time is good for people.						.648
PWE63. Leisure time activities are more interesting than work.						.645
PWE5. Life would be more meaningful if we had more leisure time.						.640
PWE43. The world would be a better place if people spent more time relaxing.						.623
PWE48. Stealing is all right as long as you don't get caught.						.525
PWE16. I would take items from work if I felt I was not getting paid enough.						.451
PWE57. There are times when stealing is justified.						.430
Alpha coefficient	.94	.91	.83	.80	.86	.70

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Item analysis. Alpha coefficients and item-total correlations were calculated separately for each factor. Thirteen items were

eliminated and ultimately, 27 items for the first factor, 14 items for the second factor, 12 items for the third factor, 8 items for the fourth factor, 9 items for the fifth factor, and 3 items for the sixth factor were remained. No item was deleted of factor 5. Alpha values obtained .94, .91, .83, .80, .86, and .70 for the first, second, third, fourth, fifth and sixth factors, respectively

Regression analyses. Several regression analyses were conducted to examine the role of religiosity in prediction of the each six CWE factors, controlling for demographics (age, gender, father's and mother's education, family social, and economic statuses) variables. The results are presented in Table 5. After controlling the demographic variables, the correlation of religiosity with work condition and values, hard work, centrality of work, self-reliance, leisure and morality were .14, .12, .068, .001, .007, and .029, respectively. All correlation coefficients are small and two of them are non-significant, indicating the weak relationship between religiosity and work ethics.

Table 5
Relationships between Religiosity and CWE Factors, Controlling for Demographics Variables

	Work condition and values	Hard work	Centrality of work	Self- reliance	Leisure	Morality
R-change	.14	.12	.068	.001	.007	.029
R- square change	.08	.07	.031	.00	.002	.009
F-change	59.16**	55.38**	22.19**	.021	.19	6.523*

Mean Differences. To explore the relationship between work ethics and religiosity, the mean differences between low and high

religiosity groups regarding CWE factors were examined using t-tests. The results are presented in Table 6. As the results show, although there are low mean differences between high and low religiosity groups regarding all the six factors of CWE but they are still significant indicating a weak relationship between work ethic and religiosity.

Table 6
Mean Differences between Low and High Religiosity Groups
Regarding the Six Factors of CWE

	group	Mean	SE difference	t	p<
Work condition and values	L religiosity	113.44	.85	-8.30	.01
	H religiosity	120.49			
Hard work	L religiosity	55.94	.57	-8.23	.01
	H religiosity	60.62			
Centrality of work	L religiosity	49.19	.42	-6.67	.01
	H religiosity	52.03			
Self-reliance	L religiosity	33.00	.32	-3.20	.01
	H religiosity	34.03			
Leisure	L religiosity	28.87	.37	-3.21	.01
	H religiosity	30.10			
Morality	L religiosity	12.64	.17	-5.30	.01
	H religiosity	13.57			

L=Low, H= High

Discussion

Two debates in the work ethic literature are content similarities of PWE and IWE (Kamelci & Tuzu, 2017; Khorshid, 2016), and the religious/cultural basis of work ethic (Miller et. al 2002). This research contributed to these debates by finding out that there probably is a common work ethics (CWE) instead of two separated work ethics of PWE and IWE and that these two kinds of ethics are only partly based on religiousness because of weak relationship between religion and work ethics. Factor analysing all items of PWE and IWE scales separately for high and low religiosity groups revealed that most of the items had loadings on the same factors and regression analyses and mean differences t-test showed a weak but significant relationship between religiosity and work ethics.

The findings of several exploratory factor analyses showed that PWE and IWE items were very similar so that it could be combine them into a CWE or common work ethics. Islam and Christianity religions along with Judaism known as Abrahamic religions have the same origins (Khorshid, 2016; Quddus, Bailey & White, 2009) and then are similar. For example, bribery, fraud, discrimination as unethical and employee compensation as ethical behaviors are common in both Christianity and Islam religions (Khorshid, 2016; Quddus et. al. 2009; Abou-Zaid & Leonce, 2014). Moreover, both religions honouring on hardworking, avoiding laziness and waste time, and achievement and success values (Yousef, 2001; Arslan, 1999). Quoquab and Mohammad (2013) also argued about similarities between different work ethics including Islamic work ethics, Protestant work ethics, Hindu work ethics, and Buddhist work ethics. Specifically, they argued that IWE and PWE are similar regarding the values of honesty, loyalty, fairness, and patience at workplace; hard Work,

perseverance, and dedication; and self-development and societal welfare.

The previous Iranian research regarding the relationship between religiosity and work ethics showed a significant weak relationship between these two variables. For example, Haghghatian and Salehi (2014) reported correlations ranged .16-.34 between the five dimensions of religiosity (i.e. ideological, intellectual, ritualistic, experiential, and consequential) and work ethics in a sample of employees. Similarly, Serajzadeh and Rahimi (2015) reported correlations ranged .14-.23 in a sample of university students. Moreover, they found no relationship between religiosity with ethics for altruism, humility, and responsibility. The weak relationship between the religiosity and work ethics and no relationship between some specific ethical values and religiosity indicate that the work ethics probably is not a religion-based phenomenon. Research suggests that there have been significant changes in the religiosity of Iranian students in recent years. For example, Naseri, Kaveh and Rabani (2016) reported that there is a decrease in the level of students' religiosity and also there is an increase in acceptance of pluralism in religiosity indicating that students do not restrict worship and to a particular type and consider various methods for practicing religion; in fact, they do not tend to imitate a particular type of rulings. In recent years the Iranian public sphere has gradually come under the control of modern institutions (Tavasoli & Morshedi, 2006) and virtual social networks. The first outcome of these changes is privatization and different understandings of religion. A most recent survey by Arab and Maleki (2020) revealed huge changes in Iranian religious beliefs so that only 32.2 percent of respondents identified their religion as Shi'ite Muslim and other respondents identified themselves as Atheist

(8.8%), Agnostic (5.8%), Spiritual (7.1%), and remained as the other religion. These research findings apparently show that Iranians are moving toward secularism so that they would like to work ethically whether they believe to a specific religion or not. As Miller and their colleagues (2002) suggest that protestant work ethics is not necessarily connect to a set of religious values and beliefs, this fact might be true about Islamic work ethics. Although work ethics have stem in Islamic beliefs but probably today due to the above-mentioned radical changes in religion beliefs there is probably no longer any need to believe to a set of religious values for work ethically. Weber (1958) in his recent words regarding Protestantism stated that people would working hard for achievement and wealth accumulation because the values along with work ethics take root in the society and therefore influence subsequent behavior even if not align with any set of religious beliefs.

This study has some limitations. First, the study does not differentiate between the Sunni and Shieh Muslims. It might argue that the values, lifestyle and social attitudes between the two groups differ. It is proposed that future research investigate the similarities between PWE and IWE and also the work ethics-religiosity link on these two groups of Muslims. Second, this study does not consider the differences between Muslims and Christians. Again, it is proposed that the next research should consider this important issue. Third, the participants were students and probably they have not a complete picture of work ethics, so it is proposed that the research should replicate with working populations. Finally, the research was conducted with participants who were in touch conveniently and it should be considered in the future studies.

Third, the students participated in this study voluntarily, not randomly. So, to generalize the research findings to student populations should be cautious due to the volunteer bias. We used the convenience sampling to achieve a big and sufficient sample size for several factor analyses. Future research should be conducted with randomly sample of students.

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