Educational attainment and attitudes towards war in Muslim countries contemplating war: The cases of Jordan, Lebanon, Pakistan, and Turkey

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Abstract: This study addresses the little understood relationship between educational attainment and public attitudes towards war in four predominantly Muslim countries contemplating war: Jordan, Lebanon, Pakistan, and Turkey. The multivariate analysis using public opinion data suggests that the educational attainment of respondents has no statistically significant association with believing that war is necessary for obtaining justice. In a separate analysis, there is no statistically significant association between educational attainment and believing that U.N. approval is necessary before using military force to deal with an international threat. This study suggests that there is some validity to concerns raised by the U.K.'s Department for International Development and UNICEF that education may not be contributing to peaceful conflict resolution.

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1. INTRODUCTION

Engaging in war with another country causes massive loss of lives and destruction of property, and can severely impede economic and social progress (Collier, 2007). Whether or not a country pursues war or peaceful methods of international conflict resolution depends partly on the attitudes of ordinary men and women who participate in the political decision making process through votes, protests, and financial support. Some in policy circles believe that educated people oppose war (Biaggio et al., 2004), but there are growing concerns about how educational attainment shapes attitudes towards war. A major report prepared for the U.K.'s Department for International Development titled *Education, Conflict and International Development* notes: "It is extremely important to consider the many ways in which education can be part of the problem as well as part of the solution," (Smith and Vaux, 2002, p. 61). Another key UNICEF report *The Two Faces of Education in Conflict* explains that educational institutions can encourage war by inculcating attitudes of superiority through the presentation of other countries in an inferior light, and by manipulating history and textbooks (Bush and Saltarelli, 2000). Despite these concerns, there is no empirical evidence from developing countries demonstrating how ordinary adults' attitudes towards war vary with their educational attainment. The main reason for the lack of empirical research is that, until very recently, surveys on political attitudes of ordinary adults were not systematically collected in developing countries (Evans and Rose, 2007; Tessler and Jamal, 2006).

In this study, we examine the statistical relationship between educational attainment and attitudes of ordinary adults towards war in four predominantly Muslim developing countries: Jordan, Lebanon, Pakistan, and Turkey. These four countries make compelling case studies because each frequently contemplates the use of military force against neighboring countries (Garnham and Tessler, 1995; to be discussed in the next section). Specifically, we use public

opinion data from the 2005 *Pew Global Attitudes Project* and multivariate analyses to examine the relationship between educational attainment and the belief that war is justified for obtaining justice, and the relationship between educational attainment and believing that obtaining United Nations (U.N.) approval is necessary before engaging in war.

2. BACKGROUND

2.1 Conceptual Background

Political scientists generally categorize attitudes towards or perspectives about war into one of three categories: just war theory, pacifism, and realism. Those who subscribe to just war theory will argue that sometimes there is a moral basis for war, such as the allied forces taking on Nazi Germany (Walzer, 1977). Just war theory has been applied to international law, such as the U.N. charter, to ensure that strict protocols are followed to minimize harm. Those subscribing to pacifism also strongly emphasize the moral basis for engaging in war, but believe that there are *always* other alternatives to settling international conflict, such as diplomacy and economic sanctions (Teichman, 1986); prominent pacifists have included Mahatma Gandhi and Martin Luther King. Unlike followers of just war theory and pacifism, those subscribing to realism believe that morals should stay out of the decision to engage in war. Instead, realists argue that the decision to engage in war should only be based on the desire to increase national power or ensure security, or both.

As discussed in the Introduction, the conventional view is that educated people are more likely to support peaceful perspectives, such as pacifism or just war theory. Educational researchers, however, would argue that this view is contingent upon educational institutions emphasizing moral education, peace education, human rights education, and international studies

curricula which promote a thoughtful understanding of other nations and enable people to better assess the moral, social, and economic consequences of settling international conflicts using war (Mercer, 1984). As mentioned in the Introduction, the main policy concern is educational institutions inculcating perverse morals through instruction and socialization. Perhaps the most recent extreme examples of war mongering come from Nazi Germany and Fascist Italy, where higher educational institutions spread propaganda on the merits of war (Glaeser et al., 2007).

Still, evidence suggests that education can affect attitudes towards war in at least limited or indirect ways. Emler and Frazer (1999) explain that educational attainment indirectly affects political outcomes by determining one's social status and network, which then affect a person's attitudes towards war. The role of educational attainment and institutions, however, can be eclipsed by values instilled by one's family and community.

To clarify, our aim in this study is not to examine the content of education instilled in educational institutions and the resulting student attitudes. Nor do we investigate the effects of familial and social networks. Rather, we focus on the statistical relationship between educational attainment and attitudes towards war among ordinary adults in predominantly Muslim countries facing the possibility of war.

2.2 Country Backgrounds

The four countries we examine are predominantly Muslim but from different regions of the Muslim world: the Middle East (Jordan and Lebanon), South Asia (Pakistan), and Eurasia (Turkey). Two are democracies (Lebanon and Turkey), one shifts between democracy and military rule (Pakistan), and one is a monarchy with a weak parliament (Jordan). The annual expenditure on military as a percentage of Gross National Product in Jordan (8.6%), Lebanon

(3.1%), Pakistan (3.0%), and Turkey (5.3%) are all higher than the world average (2.0%).[1] Furthermore, Jordan, Lebanon, Pakistan, and to a lesser extent Turkey have all engaged in war with perceived international threats.

Jordan has always been seen as a "moderate force in the Middle East."[2] While it participated in wars against Israel in 1948 and 1967, leading to waves of Palestinian refugees making up 60% of the population, in 1994, Jordan became the only country other than Egypt to sign a peace agreement with Israel, and has since signed subsequent agreements on water, environment, and trade.

Despite some support in the country for al Qaeda and its activities, Jordan's King Abdullah II has worked to affirm strong relations with Western Europe and the United States.[3] In addition, although Jordan has a stated interest in building an atomic energy program, it intends to use this for civilian nuclear purposes. This interest in nuclear energy is likely a result of the development of Iran's nuclear program, and suggests that Jordan and other Middle Eastern countries discussing the possibility of nuclear development are doing so as a warning to Iran.[4]

Unlike Jordan, Lebanon has an ongoing history of military involvement, as well as of U.N. involvement in its conflicts. Lebanon's conflicts largely stem from the existence of anti-Israel groups within its borders. Thus, in addition to Lebanon's involvement in the 1948 war between Israel and its neighbors, Israel has invaded Lebanon a number of times since 1978 in an

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[1] The CIA World Factbook: Military Expenditure (as percentage of GDP). Accessed on August 16, 2008. Available from: https://www.cia.gov/library/publications/the-world-factbook/fields/2034.html.

[2] International Crisis Group. "Conflict history: Jordan." Accessed September 16, 2008. Available from: http://www.crisisgroup.org/home/index.cfm?action=conflict_searchandl=1andt=1andc_country=54

[3] Islamic Extremism: Common Concern for Muslim and Western Publics. Pew Global Attitudes Project. Accessed September 18, 2008. Available at: http://pewglobal.org/reports/display.php?ReportID=248. U.S. Department of State. Background Notes: Jordan. Accessed September 18, 2008. Available at: http://www.state.gov/r/pa/ei/bgn/3464.htm

[4] Report: Jordan says it has uranium for nuclear program. Haaretz, May 5, 2007. Accessed September 18, 2008. Available from: http://www.haaretz.com/hasen/spages/855871.html. The USA Today (2007). Jordan's King Abdullah II wants his own nuclear program. Updated 19 January 2007, 1:06 PM ET <http://www.usatoday.com/news/world/2007-01-19-jordan-nukes_x.htm>. Accessed 29 July 2008. Haaretz, Jordan says it has uranium.

effort to counter attacks by the Palestinian Liberation Organization (PLO) and, more recently, Hezbollah. Israeli incursions led to the establishment of the U.N. Interim Force in Lebanon (UNIFIL) in 1978, with a mandate to confirm the withdrawal of Israeli forces from the nation and help maintain peace and security.[5] UNIFIL has been present in Lebanon continuously since then, monitoring the situation. It was instrumental in attempting to restore peace when violence erupted between Israel and Lebanon again in 1982 because of an Israeli invasion designed to destroy the PLO's military and political infrastructure in Lebanon, which resulted in the PLO leaving Lebanon for Tunis after a two-month siege and bombardment of Beirut.[6] UNIFIL's mandate was also extended in an effort to restore peace most recently in the summer of 2006 during Israel's clashes with Hezbollah (Sharp, 2006).

In addition to ongoing skirmishes with Israel, Lebanon has also experienced conflict with its neighbor Syria, which occupied the country in 1976 as part of an Arab peacekeeping force and left only in 2005, after dominating Lebanese politics for nearly thirty years.[7] Nevertheless, Syrian involvement in the country has not ended: for example, Syrian actors continue to smuggle arms into Lebanese territory to equip Hezbollah in the fight against Israel.[8] However, anti-Syrian sentiment led to the creation of a new opposition party that won national parliamentary elections in the month following Syria's withdrawal. Lebanon's current Prime Minister, Fouad Siniora, is an associate of opposition party leader Saad Hariri and embodies pro-Western views (Prados, 2006).

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[5] United Nations Interim Force in Lebanon (UNIFIL). "Background." Accessed September 16, 2008. Available at: http://www.un.org/depts/dpko/missions/unifil/background.html

[6] Timeline: Decades of Conflict in Lebanon, Israel. Accessed September 16, 2008. Available at: http://www.cnn.com/2006/WORLD/meast/07/14/israel.lebanon.timeline/index.html

[7] Hassan M. Fattah. "Syrian Troops Leave Lebanon After 29-Year Occupation." NYT, April 26, 2005. Accessed September 16, 2008. Available at: http://www.nytimes.com/2005/04/26/international/middleeast/26cnd-lebanon.html

[8] UN News Center (2008). Stability in southern Lebanon threatened, despite recent progress – Ban Ki-moon. 4 March 2008. <http://www.un.org/apps/news/story.asp?NewsID=25845andCr=lebanandCr1>. Accessed on 29 July 2008.

Pakistan, like Lebanon, has experienced ongoing conflict for the past half-century. Sporadic fighting with India over the territory of Kashmir escalated to full-scale war twice, in 1947 and 1964, and continued until a ceasefire was signed in November 2003; however, the ceasefire remains unstable.[9] The U.N. has been involved in attempts to diffuse tensions between India and Pakistan since 1948 through the U.N. Military Observer Group in India and Pakistan (UNMOGIP), which has been deployed continuously on the Kashmiri border between India and Pakistan since 1949.[10]

In addition to the Kashmir conflict, India and Pakistan fought a war in 1971 over Bangladesh (then East Pakistan), which seceded from Pakistan because of demands for autonomy not being met.[11] Pakistan's conflicts with India have been particularly troubling in the last 25 years as both countries have developed nuclear weapons—Pakistan doing so as a result of the loss of Bangladesh in its 1972 conflict with India (Kerr and Nitkin, 2008). In 1998, Pakistan responded to India's test of nuclear weapons by conducting six nuclear bomb tests, resulting in sanctions by the United States.[12] Although Pakistan has pledged not to engage in an arms race with India and pledged no-first-use-against-non-nuclear-weapon-states, concerns exist about its potential use of nuclear weapons as a deterrence strategy as well as about the potential of terrorist organizations and other states obtaining nuclear expertise or weapons from Pakistan; such concerns have gained legitimacy through recent exposure of the nuclear network involving the founder of Pakistan nuclear program, A. Q. Khan (Kerr and Nitkin, 2008).

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[9] Uppsala University, Uppsala Conflict Data Program Database. Accessed September 5, 2008. Available from: www.ucdp.uu.se/database, Uppsala University

[10] UNMOGIP . Accessed September 5, 2008. Available from: http://www.un.org/depts/dpko/missions/unmogip/.

[11] "Bangladeshi War of Independence/Indo-Pakistani War of 1971." Global Security. Accessed September 5, 2008. Available from: http://www.globalsecurity.org/military/world/war/indo-pak_1971.htm

[12] CNN. Timeline: Pakistan's Nuclear Program. Accessed September 11, 2008. Available from. http://edition.cnn.com/2004/WORLD/asiapcf/02/04/pakistan.nuclear.timeline.reut/index.html

Of the four countries, Turkey's direct involvement in external war has been the most limited. The state's primary conflict has been an ongoing internal conflict with the Partiya Karkeran Kurdistan (PKK), or Kurdistan Worker's Party. However, Turkey's involvement in Cyprus—particularly the Turkish invasion of the Northern part of Cyprus in 1974—has led to continued tensions with Greece. Turkey has raised the threat of coercive action against Greece multiple times, most recently as a response to Greece's role in harboring a leader of the PKK and to the Greek Cypriot government's planned purchase of Russian S-300 air-defense missiles.[13] In addition, Turkey invaded Northern Iraq in February 2008 in an attempt to minimize the PKK's ability there.[14] Turkey's recent elections, giving center-right party AKP a ruling majority in the Parliament and electing AKP member Abdullah Gul to the Prime Minister's office, reflect wariness of Western influence.[15]

In summary, Jordan, Lebanon, Pakistan, and Turkey face delicate political situations, with war being a strong possibility. Despite the curiosity of educational researchers and policymakers, little is known about how attitudes towards war in these countries vary with different levels of educational attainment.

3. DATA AND METHODOLOGY

Our data on public attitudes in Jordan, Lebanon, Pakistan, and Turkey come from the *Pew Global Attitudes Project* (PGAP), carried out in the spring of 2005 by the Pew Research Center, which is a non-partisan think-tank based in Washington, DC. Of the seventeen

[13] Turkey: Arms and Human Rights. Volume 4, Number 16. May 1999. Written by Tamar Gabelnick, Federation of American Scientists <http://www.fpif.org/briefs/vol4/v4n16turk.html>

[14] Turkish Troops Enter Northern Iraq in Pursuit of Kurdish Militants. Alissa Rubin and Sabrina Tavernise. February 23, 2008. NYT, accessed September1, 2008, available from: http://www.nytimes.com/2008/02/23/world/middleeast/23turkey.html?scp=5andsq=Turkish%20invasion%20of%20Northern%20Iraqandst=cse

[15] Talking Turkey – She's a Democracy, No Qualifiers. Michael Rubin, Middle East Forum. August 6, 2004. Accessed September 1, 2008. Available at: http://www.meforum.org/article/624

industrializing and developing countries included in 2005 PGAP, six were predominantly Muslim: Indonesia, Jordan, Lebanon, Morocco, Pakistan, and Turkey. We focus on Pakistan, Lebanon, Jordan, and Turkey in this study because their historically greater involvement in external military action than Morocco and Indonesia, and their more recent involvement in military conflict. Interviews were conducted with a random sample of ordinary men and women from urban and rural areas. Efforts were made to ensure national representativeness but the sample from Pakistan is disproportionately urban. The sample size is approximately one thousand for each country.

The general form of the equations to be estimated in the multivariate analyses can be expressed as the following reduced form model:

$$warattitude^* = \mathbf{x}\boldsymbol{\beta} + u$$

where $warattitude^*$is a categorical dependent variable. The vector of explanatory variables is represented by **x**, and notably includes the dummy variables for a respondent's highest level of educational attainment; **x** also includes other respondent-level, household-level, and regional-level characteristics (to be discussed later in this section); *u* is an error term.

3.1 Educational Attainment and Support for War

To investigate attitudes towards war, we first use the PGAP question: "Please tell me if you agree or disagree with the following statement: Under some conditions, war is sometimes necessary to obtain justice—do you strongly agree, somewhat agree, somewhat disagree or strongly disagree?" The respondents were given the following options: "Strongly disagree"; "Somewhat disagree"; "Somewhat agree"; "Strongly agree"; "Don't know/Refused to answer". Respondents who respond "strongly disagree" are likely to be strict pacifists, who believe that

there are always peaceful diplomatic methods of international conflict resolution. Those who respond "somewhat disagree" or "somewhat agree" are likely to believe in just war theory or realism.

Among categorical models of multivariate analysis, the appropriate model for this case is an ordered probit model because it captures the extra information implicit in the ordinal nature of the dependent variable (Kennedy, 2003, pp. 236). Following the standard practice of dropping the sample that did not respond or refused to respond, we code the dependent variable $warattitude$ as follows: 0 if "strongly disagree", 1 if "somewhat disagree", 2 if "somewhat agree", and 3 if "strongly agree".

3.2 Educational Attainment and Engaging in War without U.N. Approval

The second PGAP question we use is: "Do you think our country should have U.N. approval before it uses military force to deal with an international threat or do you think that would make it too difficult for our country to deal with international threats?" The respondents were given the following options: "Should have U.N. approval"; "Would make it too difficult to deal with threats"; "Don't know"/Refused to respond". This question will evoke a different threat for respondents in each country: Jordanians will likely think about Iran; Lebanese will think of Israel and Syria; Pakistanis will think of India; and Turks will likely think of Greece. For the multivariate analysis the sample of non-respondents is dropped and the dependent variable $warattitude$ takes on the following values: 0 if "should have U.N. approval" and 1 if "would make it too difficult to deal with threats".

Desiring U.N. approval before engaging in war reveals several characteristics about a respondent's attitude. It may show that the person wants to avoid conflict unless absolutely

necessary and that the respondent supports diplomacy as a first means of addressing international conflict. Support for U.N. approval may also show that individuals do not entirely trust the judgment of politicians, and may therefore require verification from an external organization such as the U.N. In addition, individuals may support U.N. approval because it ensures that the cost of the war will not be borne by the country alone, and that other nations will help protect the country. Support for U.N. approval does not necessarily imply pacifism because a person may support war provided that the U.N. ensures that the costs of this war will be shared by other countries. There is a potential drawback to using this question, which is the fact that some people may not be aware of the U.N. as an international organization, particularly those with low levels of education. This raises the possibility that responses to this question may not fully reflect attitudes about engagement in war. Nonetheless, we would expect that educational attainment makes people more wary of war and thus more supportive of U.N. approval.

The key explanatory variables for both sets of multivariate analyses are four possible dummy variables indicating a respondent's highest level of education: below primary education, primary education, secondary education, and higher education. Since multivariate analysis using dummy variables requires the exclusion of a group, we exclude the dummy variable indicating below primary education. If greater educational attainment improves attitudes, then the magnitude of coefficients for the dummies should be positive, statistically significant, and increasing with successive levels; therefore, the higher education coefficient should have the largest magnitude, followed by secondary education coefficient, and primary education coefficient should have the smallest magnitude. The control variables include the respondent's per-capita income quartile (1 if poorest, and 4 if richest), gender (1 if male, 0 if female), age-

cohort dummies (age 18-29, age 30-39, age 40-49, age 50-64 and age 65 and above), religion (1 if Muslim, 0 otherwise), and the respondent's region of residence (which varies by country).

The inclusion of the control variables is based on social science research on the determinants of political attitudes. Regardless of the country, the age of the respondent is of particular relevance because older respondents have had more direct experiences with war. Available research from Western countries indicates that older respondents have more nuanced views of peace (Biaggio et al., 2004). Furthermore, controlling for age allows us to somewhat hold constant the variations in educational content across age-cohorts. For example, the content of education under the late General Muhammad Zia-ul-Haq's Pakistan government in the 1980s included considerably more anti-India political propaganda than subsequent governments (Ahmad, 2004).

We measure socioeconomic status using per-capita income quartiles, which we construct by following these steps: first, we calculate the per-capita income of the respondent's household (in US$, adjusted for purchasing power parity). Next, we divide the respondents into quartile 1 (poorest), quartile 2, quartile 3, and quartile 4 (richest). Existing research findings on the impact of socioeconomic status on attitudes is mixed. Some research shows that individuals from lower socioeconomic status are less likely to support peaceful negotiations between Israeli and Palestinian politicians (Nachtwey and Tessler, 2002). Other research, however, shows that socioeconomic status does not significantly explain attitudes towards terrorist action against the United States (Tessler and Robbins, 2007) or support for Palestinian-Israeli peace negotiations (Sahliyeh and Deng, 2003). Further complicating the relationship is evidence that individuals from a higher socioeconomic status in Jordan and Algeria are more likely to support military action or terrorism (Tessler and Robbins, 2007).

Existing research on determinants of political attitudes supports the inclusion of the other control variables. For example, research generally concludes that women are more peace-oriented than men in the Muslim world (Tessler et al., 1999). The effect of being Muslim on peace depends on whether the person subscribes to political or liberal Islam. Some research suggests that subscribing to political Islam is associated with opposing a peaceful resolution of the Arab-Israeli dispute (Tessler and Nachtwey, 1998). Subscribing to liberal or secular Islam, however, is linked to support for peace and non-violence (Tessler and Robbins 2007; United States Institute of Peace, 2002). Unfortunately, the PGAP 2005 does not allow us to determine whether a respondent subscribes to political or liberal Islam. We are able to control for religiosity, however, with responses varying between four options ranging from not religious to very religious. We also control for the number of children in the household because respondents surrounded by children are more likely to be opposed to war because of safety implications for children. We also control for respondents' region of residence. The data allow us to control for a respondent's state or providence; as a result, we are able to somewhat control for the influence of communities and institutions (such as non-governmental organizations)—all of which are known to play an influential role in shaping political attitudes in the Muslim world (Jamal, 2007). Finally, in order to avoid the methodological problem of endogeneity, we do not include other political attitudes (such as attitudes on the Israeli-Palestinian conflict) as control variables because education affects such attitudes.

4. ANALYSIS

4.1 Educational Attainment and Agreeing that War is Justified for Achieving Justice

Figure 1 illustrates the relationship between respondents' educational attainment and attitudes towards war being sometimes necessary for obtaining justice. There are some differences across countries. For any given educational attainment, over half of the respondents in Jordan and Pakistan believe that war is sometimes or always justified. Across educational attainment levels, there appears to be no relationship between educational attainment and the belief that war is sometimes or always justified in Jordan and Pakistan. In contrast, it appears as if educational attainment is associated with believing that war is sometimes or always justified in Lebanon and Turkey.

[Insert Figure 1 about here]

As standard practice in multivariate analysis of public opinion, we drop the sample that responded "don't know/refused". Appendix Table 1 shows the summary statistics of the dependent and explanatory variables for the sample of each country. Within the sample of those reporting their attitude towards war, there are some differences by educational attainment across the four countries: significantly larger shares of respondents in Lebanon (50.1%) and Turkey (58.5%) have completed secondary or higher education compared to Jordan (36.0%) and Pakistan (17.3%).

Table 1 presents the results of the ordered probit analysis on educational attainment and support for war. As discussed earlier, if educational attainment discourages support for war, we should find negative and statistically significant coefficients on each of the educational attainment dummies. In addition, the magnitude of the coefficients should increase with subsequent levels of education. Remarkably, the coefficients for the educational attainment dummies in Table 1 are not statistically significant for Jordan, Lebanon, and Pakistan. In Turkey, those who have completed college or university education are likely to be *more* supportive of

war than those without primary education. Overall, there is no statistical evidence from the ordered probit model that educational attainment discourages support for war in any of the four countries.

[Insert Table 1 about here]

The coefficients for the control variables are worth noting. In Turkey, respondents aged 65 and above are more likely oppose war than the youngest respondents, holding all else constant. In addition, richer respondents in Pakistan and Turkey are more likely to oppose war. Consistent with research from other countries, men are more supportive of war in Jordan, Lebanon, and Turkey. Finally, Muslims are more supportive of war in Lebanon, but religious respondents in Lebanon and Turkey are more likely to oppose war.

4.2 Educational Attainment and Engaging in War without U.N. Approval

Figure 2 shows the relationship between respondent's educational attainment and believing that U.N. approval is necessary before using military force to deal with an international threat. In each country, 30% to 50% of respondents believe that U.N. approval is unnecessary. There are no discernable patterns between educational attainment at the below primary, primary, and secondary levels and support for obtaining U.N. approval in Jordan, Lebanon, and Pakistan. In contrast, support for obtaining U.N. approval increases with educational attainment in Turkey; this finding might be reconciled with findings from the previous section because it may be that the highly educated in Turkey believe that U.N. approval will ensure a morally just war with fewer economic and social repercussions. In each of the four countries, respondents with higher education appear especially supportive of gaining U.N. approval before engaging in war.

[Insert Figure 2 about here]

We again drop the respondents who gave "don't know/refused" responses and proceed to the multivariate analysis. As discussed earlier, this is a simple binomial probit analysis because the dependent variable takes on a value of 1 if the respondent believes U.N. approval is unnecessary and 0 if the respondent favors U.N. approval before engaging in war. Again, the summary statistics are presented in Appendix Table 1.

Table 2 presents the results of the binomial probit analysis on supporting war without U.N. approval. If we believe that educational attainment increases the likelihood of desiring U.N. approval, then the coefficients for the educational attainment will be negative and statistically significant. Furthermore, the magnitudes of the coefficients should increase with each subsequent level. For Lebanon, the positive and statistically significant coefficient for primary education indicates that respondents with primary education are more likely to support war without U.N. approval than respondents without primary education. Similarly, the coefficients on the secondary education dummy variables from Jordan and Lebanon reveal that respondents who have completed secondary education are more likely to reject U.N. approval than those without primary education. There is no statistical association between higher education and attitudes towards U.N. intervention in any of the four countries. These multivariate results therefore provide no statistical evidence from any of the four countries that educational attainment makes people more supportive of obtaining U.N. approval before engaging in war.

[Insert Table 2 about here]

Regarding the coefficients for the control variables, the eldest respondents in Turkey are more supportive of going to war without U.N. approval than the youngest respondents. There is also evidence that the rich are more wary of war: our analysis shows that the richest respondents in Jordan, Lebanon, and Turkey prefer obtaining U.N. approval before engaging in war. There is

again more evidence of men being more eager to engage in war than women in Pakistan. Lastly, Muslims in Lebanon are more likely to support war without U.N. approval, though being religious in Jordan is associated with opposition to war without U.N. approval.

4.3 Robustness Checks

A number of other analyses for each country were undertaken to examine the robustness of the relationships between educational attainment and believing that war is necessary for obtaining justice, and between educational attainment and believing that U.N. approval is necessary before using military force to deal with an international threat. To begin with, the analyses were conducted without any control variables. Next the analyses were conducted without the income variables because of the strong correlation that exists between educational attainment and income. In a separate set of analyses, the dummy variables for educational attainment were replaced with an index variable, where the values represents a respondent's highest level of education (that is, index=0 if below primary education, =1 if primary education, =2 if secondary education, =3 if higher education). These sets of analyses did not provide evidence of a statistically significant association between educational attainment and attitudes towards war, and are therefore not included here.

5. DISCUSSION

The findings of this study are discouraging for proponents of increased investment in education by governments and international organizations, and also conflict with other research that links educational attainment with social benefits such as economic growth, democracy, and better health (McMahon, 1999). Indeed, the findings of this study belong to a smaller body of

research that suggests that educational attainment is not producing social benefits. For example, the cross-country growth regressions in Pritchett (2001) show that average levels of education in developing countries may not lead to higher growth rates. Using public opinion data from predominantly Muslim countries, Krueger (2007) and Shafiq and Sinno (2010) show that educational attainment is not associated with reduced support for suicide bombing and other forms of terrorism.

There are several possible explanations why we were unable to find a statistical relationship between educational attainment and attitudes towards war. First, regardless of educational attainment, ordinary men and women in Jordan, Lebanon, Pakistan, and Turkey may be wary of Western mediators such as the U.N. because of its perceived bias against Muslim countries. In Pakistan, anti-Western sentiments have traditionally fluctuated, with support rising with large aid and dropping with reduced aid (Naghmi, 1982). In all four countries, there is also resentment over the Western military presence in the Muslim world, particularly in Iraq. It is therefore possible that people may favor diplomacy but oppose the U.N. and Western-funded organizations because of a perceived pro-Western and anti-Islam bias. At the very least, educated people may be aware that such organizations have contributed to short-term peace and long-term dependence, rather than the establishment of institutions for long-term peace and growth (Doyle and Sambanis, 2000; Sambanis, 2008).

A second explanation for the absence of a statistically significant relationship between educational attainment and attitudes towards war is that it is possible that educational institutions are not emphasizing the kind of curricula which promote a thoughtful understanding of other nations and enable people to better assess the moral, social, and economic consequences of settling international conflicts using war. Assessing the validity of this explanation is beyond the

scope of this study but is a promising topic for future research. For example, there is the prospect of using a survey of students and teachers (rather than ordinary adults) to understand the differences in the ways students learn about war. At present, the *Civic Education Survey* (a survey of ninth graders and their teachers, conducted by the International Association for the Evaluation of Educational Achievement) is a suitable model, although at present the *Civic Education Survey* is not conducted in predominantly Muslim countries, and questions on war are not asked. There is also great scope for qualitative research, particularly on the curricula, and the processes through which schools and teachers in different contexts address topics that may influence students' attitudes towards war and conflict. Bekerman (2004) presents one such model for this type of research for understanding an integrated Jewish-Arab school in Israel; specifically, the study uses ethnography to observe how the experience of school integration can influence students' political knowledge, attitudes, and perceptions of groups different from themselves.

In pursuing quantitative and qualitative research on educational institutions and curricula, recent evidence suggests that the research focus should be on traditional public and private schools, not Islamic schools or "madrassas". Indeed, despite concerns that madrassas make students less tolerant (Coulson, 2004), emerging research indicates that the number of madrassas is far lower than anecdotal evidence suggests. Even in Pakistan, which is frequently criticized for large numbers of madrassas, Andrabi et al. (2006) show that the share of total children enrolled in madrassas is less than 1%. Moreover, Hefner and Zaman (2007) present qualitative research from a number of Muslim countries showing that most madrassas do not subscribe to fundamentalist and intolerant views.

For both quantitative and qualitative research endeavors, it is valuable to consider differences in the educational experiences across cohorts. Our analyses controlled for the age-cohort range of respondents because lengthier exposure to war and other violent conflict affects attitudes towards war. More research is necessary, however, in order to understand how attending schools, colleges, and universities during periods of violent conflict, as opposed to periods of relative calm, might affect students' attitudes. Ben-Porath (2006) suggests that during wartime, schools in democracies emphasize what she calls "belligerent citizenship," focusing on patriotism and national unity. During times of peace, on the other hand, schools aim to instill liberal democratic citizenship in youth. Differences between citizenship education policies and curricula used during times of war and peace therefore deserve closer scrutiny by researchers interested in understanding the link between education and attitudes towards war. Such research will require an investigation into curricula over various years, interviews with ordinary men and women on their past educational experiences, and interviews with current students.

Finally, we encourage research on the robustness of our findings using alternative data sources. Currently, there are several surveys underway at collecting public opinion data in the Muslim world, such as *The Arab Barometer* and *The Asian Barometer* (both collected by an international consortium of universities and research centers) and the *Poll of the Muslim World* (collected by Gallup). Since these surveys contain slightly different questions on attitudes towards international conflict, there are opportunities to gain a more complete understanding between the educational attainment and attitudes towards war in Jordan, Lebanon, Pakistan, and Turkey.

6. CONCLUSION

This study addressed the little understood relationship between educational attainment and public attitudes towards war in four predominantly Muslim countries contemplating war: Jordan, Lebanon, Pakistan, and Turkey. The multivariate analysis using public opinion data suggests that the educational attainment of respondents has no statistically significant association with believing that war is necessary for obtaining justice. In a separate analysis, there is no statistically significant association between educational attainment and believing that U.N. approval is necessary before using military force to deal with an international threat. This study therefore suggests that there is some validity to concerns raised by the U.K.'s Department for International Development and UNICEF that education may not be contributing to peaceful conflict resolution. The lack of statistically significant association in the four countries, however, is not an excuse to dismiss the potential of education in promoting peaceful methods of avoiding war in countries contemplating war. Further quantitative and qualitative research on educational institutions and curricula in the four countries can provide details on how educational attainment can promote peaceful conflict resolution.

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Table 1: Ordered probit regression results: Support for war to obtain justice

	Jordan	**Lebanon**	**Pakistan**	**Turkey**
	Coef.	Coef.	Coef.	Coef.
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Primary education (dummy)	-0.185	0.110	-0.133	-0.002
	(0.110)	(0.133)	(0.095)	(0.192)
Secondary education (dummy)	-0.012	0.220	-0.056	0.054
	(0.114)	(0.142)	(0.142)	(0.203)
Higher education(dummy)	0.018	0.265	0.097	0.391
	(0.168)	(0.167)	(0.155)	(0.229)
Controls				
Age 30-49 (dummy)	0.065	-0.136	-0.081	-.304**
	(0.099)	(0.091)	(0.087)	(0.099)
Age 50-64 (dummy)	0.242	-0.107	-0.275**	0.539**
	(0.134)	(0.121)	(0.129)	(0.150)
Age 65 plus (dummy)	0.019	0.487	-0.114	-0.494**
	(0.546)	(0.359)	(0.206)	(0.228)
Income quartile 2(dummy)	-0.099	0.009	-0.134	-.046
	(0.111)	(0.120)	(0.120)	(0.123)
Income quartile 3(dummy)	-0.202	-0.060	-0.184	-.322**
	(0.126)	(0.121)	(0.127)	(0.134)
Income quartile 4: richest (dummy)	-0.258	-0.214	-0.333**	-.317**
	(0.143)	(0.138)	(0.136)	(0.149)
Male (dummy)	0.391**	0.329**	0.106	0.376**
	(0.075)	(0.080)	(0.084)	(0.085)
Muslim (dummy)	0.363	1.174**	-0.360	-0.097
	(0.209)	(0.097)	(0.367)	(0.232)
Religiosity	-0.003	0.192**	-0.125	0.151**
	(0.105)	(0.038)	(0.230)	(0.062)
Cut 1	-0.573	-0.688	-2.302	-1.089
	(0.297)	(0.201)	(0.454)	(0.336)
Cut 2	0.178	0.669	-1.277	-0.714
	(0.297)	(0.204)	(0.448)	(0.335)
Cut 3	1.625	1.592	-0.319	0.184
	(0.300)	(0.209)	(0.447)	(0.335)
Regional controls	Yes	Yes	Yes	Yes
Log-likelihood	-1061.981	-888.965	-948.202	-923.164
Pseudo R-squared	0.023	0.158	0.011	0.027
N	870	788	823	710

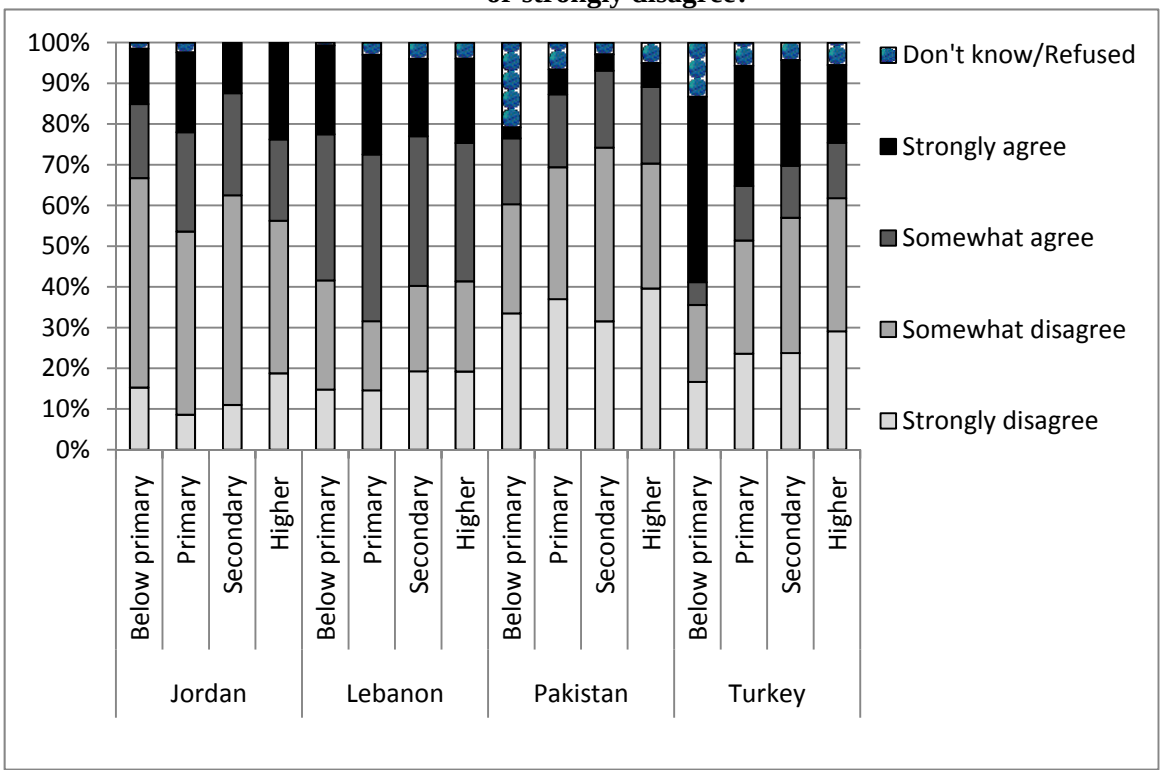
Notes: (1) **denotes statistical significance at the 1% level, *denotes statistical significance at the 5% level; statistical significance based on *z*-values; (2) Regional controls for various regions within a country; (3) The analysis excludes "Don't know/ Refused" responses. (4) "War sometimes justified" index is constructed using the values 0 ("strongly disagree"), 1 ("somewhat disagree"), 2 ("somewhat agree"), and 3 ("strongly agree"). (5) "Religiosity" index constructed using the values 0 (religion not at all important), 1 (religion is not too important), 2 (religion is somewhat important) and 3 (religion is very important).

Table 2: Probit regression results: U.N. approval before war makes it too difficult to deal with threats

	Jordan	**Lebanon**	**Pakistan**	**Turkey**
	Coef.	Coef.	Coef.	Coef.
	(Std. err.)	(Std. err.)	(Std. err.)	(Std. err.)
Primary education (dummy)	-0.001	0.345**	0.129	-0.011
	(0.129)	(0.155)	(0.109)	(0.221)
Secondary education (dummy)	0.296**	0.379**	-0.005	0.189
	(0.135)	(0.165)	(0.164)	(0.234)
Higher education(dummy)	-0.080	0.246	0.096	0.137
	(0.201)	(0.192)	(0.177)	(0.264)
Controls				
Age 30-49 (dummy)	0.038	-0.142	-0.129	0.104
	(0.117)	(0.105)	(0.101)	(0.114)
Age 50-64 (dummy)	0.108	0.034	0.094	-0.137
	(0.157)	(0.138)	(0.151)	(0.173)
Age 65 plus (dummy)	-0.206	0.427	0.193	0.472
	(0.638)	(0.419)	(0.240)	(0.262)
Income quartile 2(dummy)	-0.207	-0.202	0.133	-0.165
	(0.131)	(0.139)	(0.137)	(0.144)
Income quartile 3(dummy)	-0.190	-0.088	0.289**	-0.245
	(0.148)	(0.141)	(0.1545)	(0.156)
Income quartile 4: richest (dummy)	-0.619**	-0.275	0.225	-0.310
	(0.171)	(0.160)	(0.158)	(0.172)
Male (dummy)	-0.533	0.033	0.547**	0.041
	(0.088)	(0.091)	(0.099)	(0.098)
Muslim (dummy)	0.557	0.446**	0.120	-0.339
	(0.273)	(0.104)	(0.435)	(0.269)
Religiosity (index)	0.449**	-0.019	-0.141	0.120
	(0.127)	(0.052)	(0.251)	(0.072)
Constant	0.364	-0.489**	-0.973	0.361
	(0.367)	(0.232)	(0.518)	(0.388)
Regional controls	Yes	Yes	Yes	Yes
Log-likelihood	-573.091	-523.993	-475.154	-475.154
Pseudo R-squared	0.049	0.040	0.049	0.017
N	870	788	823	710

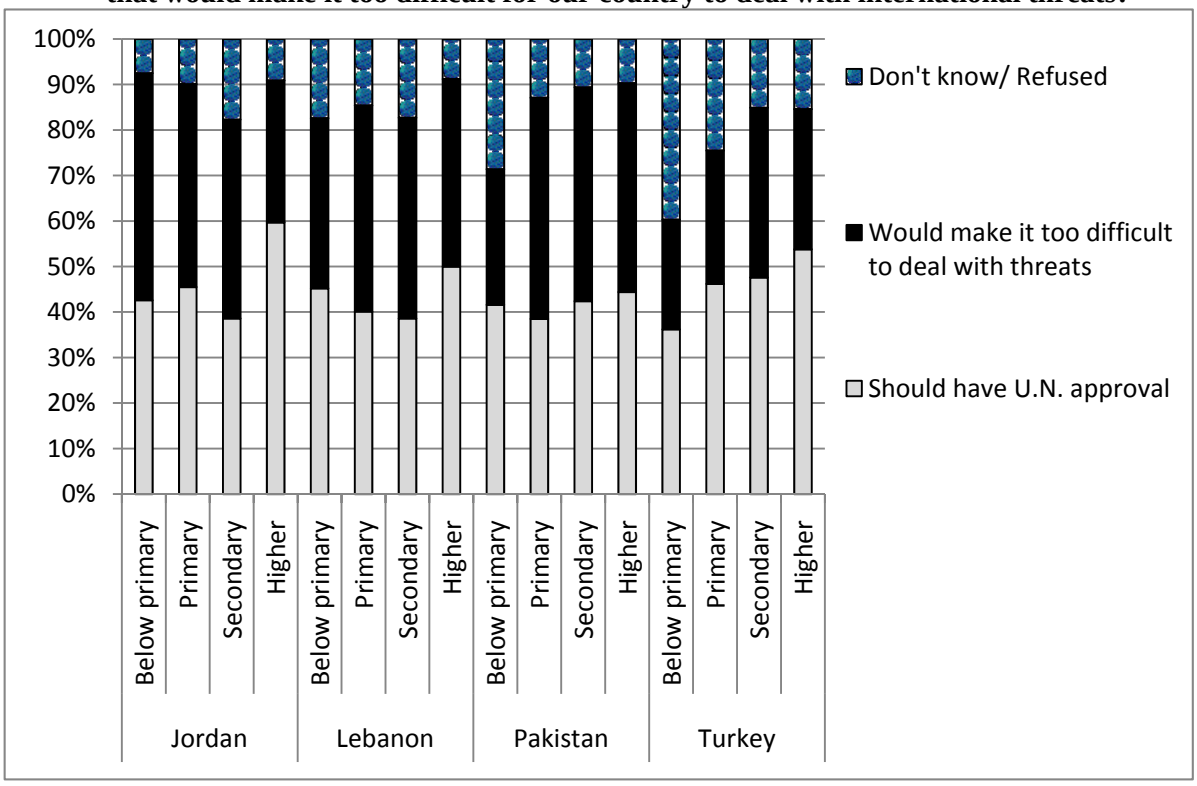
Notes: (1) **denotes statistical significance at the 1% level, *denotes statistical significance at the 5% level; statistical significance is based on *z*-values; (2) Regional controls for various regions within a country; (3) The analysis excludes "Don't know/ Refused" responses. (4) "Religiosity" index constructed using the values 0 (religion not at all important), 1 (religion is not too important), 2 (religion is somewhat important) and 3 (religion is very important).

Figure 1: Educational attainment and responses to the question "Under some conditions, war is sometimes necessary to obtain justice—do you strongly agree, somewhat agree, somewhat disagree or strongly disagree?"



Source: Pew Global Attitudes Project (PGAP) 2005

Figure 2: Educational attainment and responses to the question "Do you think our country should have U.N. approval before it uses military force to deal with an international threat or do you think that would make it too difficult for our country to deal with international threats?"



Source: Pew Global Attitudes Project (PGAP) 2005

Appendix Table 1: Summary statistics

	Jordan	**Lebanon**	**Pakistan**	**Turkey**
	Mean	Mean	Mean	Mean
	(std. dev.)	(std. dev.)	(std. dev.)	(std. dev.)
Dependent variables				
War sometimes justified (index 0 to 3)	1.572	1.360	2.171	1.611
	(0.907)	(1.008)	(0.858)	(1.151)
UN approval not necessary (dummy)	0.510	0.491	0.435	0.423
	(0.500)	(0.500)	(0.496)	(0.494)
Explanatory variables				
Below primary education (dummy)	0.428	0.137	0.373	0.058
	(0.017)	(0.012)	(0.017)	(0.009)
Primary education (dummy)	0.209	0.374	0.416	0.380
	(0.014)	(0.017)	(0.017)	(0.018)
Secondary education (dummy)	0.280	0.344	0.115	0.434
	(0.015)	(0.017)	(0.011)	(0.019)
Higher education (dummy)	0.083	0.145	0.095	0.128
	(0.009)	(0.013)	(0.010)	(0.013)
Age 18-29 (dummy)	0.359	0.359	0.399	0.455
	(0.016)	(0.017)	(0.017)	(0.019)
Age 30-49 (dummy)	0.432	0.424	0.446	0.389
	(0.017)	(0.018)	(0.017)	(0.018)
Age 50-64 (dummy)	0.205	0.203	0.114	0.114
	(0.014)	(0.014)	(0.011)	(0.012)
Age 65 plus (dummy)	0.005	0.014	0.041	0.422
	(0.002)	(0.004)	(0.007)	(0.007)
Income quartile 1:poorest (dummy)	0.266	0.198	0.242	0.220
	(0.015)	(0.014)	(0.015)	(0.016)
Income quartile 2(dummy)	0.247	0.238	0.211	0.231
	(0.015)	(0.015)	(0.014)	(0.016)
Income quartile 3(dummy)	0.209	0.249	0.205	0.238
	(0.014)	(0.015)	(0.014)	(0.016)
Income quartile 4: richest (dummy)	0.278	0.220	0.234	0.225
	(0.015)	(0.015)	(0.015)	(0.016)
Religiosity (index 0 and 3)	2.843	2.071	2.977	2.562
	(0.371)	(0.960)	(0.180)	(0.757)
Male (dummy)	0.507	0.489	0.617	0.517
	(0.017)	(0.018)	(0.017)	(0.019)
Muslim (dummy)	0.967	0.581	0.988	0.960
	(0.006)	(0.018)	(0.004)	(0.007)
Number of children	1.515	0.997	3.378	0.946
	(0.059)	(0.042)	(0.090)	(0.048)
N	870	788	823	710

Notes: (1) Means and standard deviations (in parentheses); (2) All values are weighted; (3) The analysis excludes "Don't know/ Refused" responses; (4) "War sometimes justified" index is constructed using the values 0 ("strongly disagree"), 1 ("somewhat disagree"), 2 ("somewhat agree"), and 3 ("strongly agree"). (5) "Religiosity" index constructed using the values 0 ("religion not at all important"), 1 ("religion is not too important"), 2 ("religion is somewhat important") and 3 ("religion is very important").