

RESEARCH ARTICLE

Durkheim's Theory of Suicide: A Study of Adolescents in Turkey

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Abstract

Although Durkheim's theoretical arguments of suicide have been widely studied, empirical research is largely limited to Western populations, and few studies have focused on Muslim-populated countries. Using survey data, this study examines the association between the predictors for three forms of suicide as theorized by Durkheim (i.e., egoistic, anomic, fatalistic) and suicide attempts among Turkish adolescents at the individual level. Durkheim's theory has been found to still be applicable over a century later in a religiously and culturally different context from its original framework. Almost all the predictors associated with each form of suicide were found to have significant links with an increased risk of attempting suicide. As a result, adolescents who are very weakly integrated into their social circles or who are very weakly or strongly regulated by society are shown to be most at risk these days for suicidal behaviors. Other results, contributions, implications, and limitations of the study are also discussed.

Keywords: Durkheim • Egoistic suicide • Anomic suicide • Fatalistic suicide

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Policy makers, social scientists, and health professionals consider adolescent suicidality to be a major public health problem that needs to be prevented, given the alarming prevalence over the last few decades (Bearman & Moody, 2004). Identifying the determinants of adolescent suicidality is critical for being able to effectively identify and protect adolescents who are at risk. While many studies are found to have focused on the risk factors of suicidal outcomes, Emile Durkheim's *Suicide* (1951) is one study that has proposed a unique and prominent theory for understanding the root causes of this complicated phenomenon. Since its first publication, this work has remained as a point of departure for the vast majority of social epidemiological studies as well as a dominant paradigm for research on suicide.

In *Suicide*, Durkheim (1951) challenges the reader to understand how the patterns of one of the most psychological, intimate, and individual acts rests not upon psychological foundations but upon the pattern of social facts (Berkman et al., 2000). Durkheim (1951) showed that suicide can be explained etiologically through social structures and their ramifications and that the structure of social relations are what bind and constrain the individual and protect them from suicide. For Durkheim, even though suicide is an individual act with individual reasons, suicide rates are the result of social reasons, social facts more precisely, and they can be explained through two dimensions of social structure: social integration and social regulation. Social integration refers to the degree to which individuals are embedded in society and share collective sentiments with others (Bearman, 1991), while social regulation refers to the degree to which individuals are controlled and constrained by the norms and rules that society applies to them (Hodwitz & Frey, 2016). In this context, the strength or weakness of the forces that bind an individual to other people, integrate them into society (i.e., the dimension of social integration), and regulate their desires and satisfaction (i.e., the dimension of social regulation) determines one's propensity to commit suicide. In other words, social integration and social regulation are not harmful in and of themselves, at least not at moderate levels. They often work in tandem to condition suicide (Mueller & Abrutyn, 2016).

While many studies draw on Durkheim's theory of suicide to validate the protective features of social integration and social regulation against the risks of self-destructive behaviors including suicide, these studies have mainly focused on Western contexts (Bearman, 1991; Stack, 2004; Kushner & Sterk, 2005; Hodwitz & Frey, 2016; Mueller & Abrutyn, 2016). Only a few studies have investigated the applicability of Durkheim's ideas in Muslim-populated countries (Pedahzur et al., 2003; Abdel-Khalek, 2004; Leenars, 2004) such as Turkey. The findings from Western studies can be argued to perhaps not be generalizable to non-Western populations, especially countries that follow Islamic traditions as generally different cultural and religious influences on suicidality exist in these countries, particularly in regard to suicide victims and their

families (Lester, 2006). Durkheim would consider these results to be generalizable because he believed suicide rates are stable over time and across contexts and that variations in suicide rates do not relate to individual characteristics or contextual factors but to the structure of social relations (Durkheim, 1951). Nevertheless, studying Durkheim's etiological forms of suicide in previously ignored Muslim-populated countries like Turkey to see whether Durkheim's argument is still applicable would present a significant contribution to the current literature. Moreover, although plenty of research has validated Durkheim's ideas using aggregate-level data, only a handful of studies have situated Durkheim's ideas at the individual level. Using individual-level data is crucial for avoiding the risk of committing ecological fallacy. Some individuals may become isolated in an integrated society, whereas others may have a strong personal network in a segregated society (Thorlindsson & Bjarnason, 1998).

In this paper, I will address how well Durkheim's theory of suicide applies to adolescents in Turkey. Although Durkheim suggested four etiological forms of suicide regarding the combination created by the dimensions of social integration and social regulation (egoistic, anomic, altruistic, and fatalistic), I will focus this paper on three forms of suicide in the Turkish context: egoistic and anomic suicides as the most studied and accepted forms and fatalistic suicide, which has been fairly overlooked. I will do this using data collected through a self-reported survey (Youth in Europe Survey of Istanbul) administered to high-school students in Istanbul's Bagecilar District in Turkey.

Conceptual Framework

Egoistic Suicide

Egoistic suicide occurs when an individual is strongly isolated from social circles and thus strongly unregulated by the norms and rules of society. According to Durkheim, suicide "varies strongly with the degree of integration of the social groups of which the individual forms a part" (1951, p. 209). The more one gets isolated and alienated from the groups to which one belongs, the more one depends only on themselves and as a consequence becomes individualized.

For Durkheim (1951), for a social group, whether family, church, or peer group, that provides a powerful safeguard against suicide, the greater its presence in one's life, the greater its protection. Thus, when addressing adolescents, supportive family and peer relationships as well as support from the school environment can be asserted to play an important role in preventing suicidal thoughts and suicide. In this regard, socially isolated or excluded adolescents may feel deep sadness and be susceptible to suicide (Abrutyn & Mueller, 2014a), the reason being that isolated adolescents have few or no ties to the remainder of the family, school, or friendship circles. In such

situations, they may internalize isolation from family, school, or friendship circles as being indicative of low self-worth or self-confidence and may be more likely to consider suicide (Bearman & Moody, 2004).

In accordance with the above arguments, many studies focusing on egoistic suicide have considered alienation as a key indicator of social isolation and consequently a key incentive for egoistic suicide. While alienation from pro-social members of the family, peer group, and school environments is not a perfect indicator of social isolation, I argue that alienation structurally produces a certain amount of social isolation, preventing the development of social relationships and leading to higher likelihood of suicide. For instance, according to Hawton et al. (1982) and Dubow et al. (1989), an adolescent at risk of suicide is one who is alienated from their family, consequently receiving little support from them and not being integrated into their school environment.

In addition to alienation from family and school, alienation from peers also has a powerful effect on adolescent suicidality. The reason might be that during adolescence, individuals shift their attention from parental relations to peer relations due to the increased struggle with identity and development issues. For this reason, the impact from peer relations becomes highly influential in adolescence (Fuligni & Eccles, 1993). For instance, lack of peer support was found to be a significant predictor in adolescents attempting suicide (Perkins & Hartless, 2002). According to Johnson et al. (2002), difficulty in making friends, frequent arguments or anger with peers, social isolation, lack of close friends, and poor relationships with friends and peers are also risk factors for subsequent suicide attempts. Based on these arguments, I anticipate the incidence of suicide (egoistic suicide) to be related to the degree of parental, peer, or school alienation an adolescent experiences. Therefore, I hypothesize that the more an adolescent is alienated from their parents, peers, or school, the higher their likelihood of attempting suicide (Hypothesis 1).

Anomic Suicide

Durkheim defined anomie as normlessness resulting from the absence of regulation and argued that anomic suicide “results from man’s activities lacking regulation and his consequent sufferings” (1951, p. 258). According to Durkheim, anomic suicide differs from egoistic suicide in that it is based “not on the way in which individuals are attached to society, but on how it regulates them” (1951, p. 258). Egoistic and anomic suicide both “spring from society’s insufficient presence in individuals” (p. 258); in egoistic suicide however, the individual is alienated from truly collective activity at their sole discretion, while in anomic suicide, the individual is alienated from collectivity as a result of society leaving them unregulated and not reigned in. According to Abrutyn (2019), people are anchored to specific persons and groups both in a corporeal sense (e.g., through physical interactions) as well as in a social

psychological sense (e.g., one develops an identity by interacting with those people and groups). Having these anchorages be threatened or disintegrated is experienced as tragedy or disaster, and an anomic state tends to occur. Accordingly, in anomic suicide, the individual is integrated into their social circles but then gets detached from their ties not of their own volition and therefore are no longer regulated by the norms and rules of their social group. In this regard, anomic suicide is related to societal crises that occur during times of rapid social change and turbulence. In these situations, the regulatory function of integration is weakened due to weakened social controls and normlessness (Berkman et al., 2000).

Regarding adolescents, Bearman (1991, p. 517) argued:

The teen today is often a member of two separate societies, the family of origin and the peer group. In both, the adolescent is integrated and therefore subject to the normative demands and regulation of each. The normative dissonance experienced by the teen is the same as anomy.

In this respect, when crises or sudden, unexpected shocks happen in adolescents' social circles (whether familial or peer groups) or when a serious real or perceived threat to a cherished, imagined, or desired social bond occurs, an anomic setting can be asserted to tend to occur (Abrutyn & Mueller, 2014a). For instance, having an adolescent completely integrate with their school and neighborhood leads to high level of moral regulation as both are social environments with regulative forces providing adolescents with sentiments of obligation and commitment and a set of common goals. However, when this moral regulation weakens or disappears due to undesired neighborhood or school changes (i.e., when one's total integration weakens or disappears even though one wants to maintain integration), anomy tends to occur. This is because the contextual change resulting from compulsory neighborhood and school change creates a contextual anomic state and implies a weakening of contextual regulation.

Alongside this, family life with its domestic environment regulates adolescents' attitudes and behaviors by providing restrictions. When an adolescent's family life suffers from losing a family member such as a parent or a sibling, anomy tends to occur. The reason is that the dying of a family member implies weakness in both the integrative and regulative functions of family environment, because without that family member, the child loses a warm and integrative relationship and may become isolated. Also, without an identification figure to provide a role model by modeling rigid rules, the child loses a sense of control and may become unregulated. Therefore, this suffering creates a domestic anomic state and implies a weakening of parental regulation. Following this argument, I anticipate contextual and domestic anomic states to affect the survivor (i.e., adolescent) who has not adapted to the new situation in which they find themselves, which thus offers less resistance to suicide and leads them to suicide.

Past research provides support for my argument regarding the contextual anomic state to lead to suicide. For example, assuming that obligatory neighborhood and school change is similar to migrating to another city or country with regard to outcomes, as undesirably losing existing ties with friends and neighbors in both situations damages the regulatory function of integration, I argue this adolescent to be left with inadequate regulation due to the disruption of social cohesion and diminution of support. Therefore, the conditions for suicide tend toward a maximum. To illustrate, an analysis by Hjern et al. (2002) showed those who'd migrated domestically and internationally to have 3 to 4 times higher odds of suicide and suicide attempts compared to the general population in Sweden. Potter et al. (2001) also found that, during the 12 months following either a domestic or international move, the odds of nearly lethal suicide attempts doubled.

Previous research also supports my argument regarding the domestic anomic state leading to suicide. For instance, experiencing negative life events such as the death of a parent can strongly affect one's mental health and may lead adolescents to first consider and then attempt suicide (Agnew, 2001). Cohen-Sandler et al. (1982) found adolescents who had either attempted or considered suicide to be more likely to have experienced negative life events such as death of a grandparent compared to adolescents who had not considered or attempted suicide. In addition, Niederkrotenthaler et al. (2012) associated parental death due to causes other than suicide with a 170% increased risk for suicide and 160% increase in attempted suicide among offspring with parental non-suicidal death having the most detrimental effects when occurring in the offspring's adolescence or young adulthood. In line with these arguments, I hypothesize that adolescents who have recently experienced a neighborhood or school change or lost a family member will have a higher likelihood of attempting suicide (anomic suicide; Hypothesis 2).

Fatalistic Suicide

Fatalistic suicide occurs when an individual is barely integrated into their social group but is strongly regulated by the norms and rules of that group (Abrutyn & Mueller, 2014a). Normally, low integration should lead to low regulation. Because an individual's weak integration to their social group can be linked to their weak compliance with group norms, excess pressure on them to comply with group norms may place an intolerable burden on this highly individuated person and lead to a fatalistic state.

For Durkheim (1951), fatalistic suicide has very little contemporary importance, and examples are practically unfindable in modern societies. Therefore, few studies that followed Durkheim's example of the childless wife as a fatalistic individual (1951, p. 276) for assessing the validity of fatalistic suicide found married women without

children to have stronger suicidal tendencies (Hughes & Gove, 1981; Bearman, 1991). As Bearman (1991) indicated, the childless wife is not sufficiently integrated to her family; however, she is highly regulated as a result of her occupying the role of wife without an independent social identity as a mother. Her efforts to secure a tie to her husband only as a wife and not as the mother of her husband's child enslave her further to others' ideals (p. 521). Therefore, the excessive demands and obligations needed to meet the socially legitimated demands of others in the household might promote suicide if little or no hope exists for escape from this enslavement.

Nevertheless, I propose that this argument should not be restricted only to the childless wife. The most important thing to know here is that fatalistic suicide occurs when an individual is weakly integrated into a social group but is strongly regulated by the group norms. In this regard and similar to the childless wife, when an adolescent who is weakly integrated into their group and thus has weak compliance to the group norms is expected by his/her peers to comply with the group norms and is threatened to be expelled from the group in case of failure to comply, a fatalistic state tends to occur as a result of strong regulation through group norms. The reason is that, in a cohesive group such as a tightly-knit peer group, the group prevents opposition to group norms and rules through excessive control and intolerance of undesirable behaviors using its cohesive social relationships (Coleman, 1988). As a result, this fatalistic state might lead to suicide. To summarize, high degrees of regulation imposed by the peer group can translate into suicide when real, imagined, or potential failure to meet group expectations or obligations results in severe mental, emotional, physical, and/or social risks (Abrutyn & Mueller, 2018).

In this regard, imagine an adolescent who is marginally integrated into their peer group and thus has weak compliance with the group norms. This individual is nonetheless viewed and treated by the group members as fully integrated and thus fully regulated. Substance use is a norm accepted by the group members and is very common and also highly recommended. In this case, despite having a weak integration to the peer group and group norms and being reluctant to use illicit substances, the adolescent is expected by the group members to use substances in order to maintain group membership and not be ostracized, ignored, or despised. Put differently, the adolescent feels pressure to live up to the expectations of the group and thus tries to fit in even if this individual grew up under very different circumstances and does not necessarily fully agree with the group's cultural directives (Mueller & Abrutyn, 2016). In line with this reasoning, I hypothesize that the greater the propensity an adolescent has toward using illicit substances in fear of being excluded from the peer group, the higher the likelihood they will attempt suicide (fatalistic suicide; Hypothesis 3).

Method

Data

The data for this study come from the 2008 Youth in Europe Survey and was collected in Istanbul's Bagcilar District in Turkey in 2007 by the European Cities Against Drug Organization (ECAD). ECAD is a non-profit organization that has member cities all over Europe and operates with the purpose of drug-free European cities. Istanbul is one of the 11 cities participating in this survey. Participants were mostly 14- and 15-year-old students attending the 9th and 10th grades of local secondary schools. The survey questions were created by the Icelandic Center for Social Research and Analysis (ICSRA) and measure several issues regarding social problems among adolescents such as adolescent delinquency, health problems, academic achievement, and suicidal attitudes. This study examines the responses from a total of 2,057 students.

Dependent Variable

The dependent variable in this study is suicide attempt. Students' suicide attempt was measured with two questions: (a) Have you ever attempted to commit suicide? (b) Have you attempted to commit suicide this school year? Students who answered yes to at least one of these questions were coded as "1", and students who answered no to both questions were coded "0".

Independent Variables

The independent variables are parental alienation, peer alienation, and school alienation for egoistic suicide; neighborhood change, school change, and losing a family member for anomic suicide; and propensity to use illicit substances in fear of exclusion from the peer group for fatalistic suicide.

In line with Yuksek and Solakoglu (2016), parental alienation and peer alienation formed indexes that include five items referring to the ease or difficulty a student has in deriving these items from their parents or friends: caring and warmth, discussions about personal affairs, advice about studies, advice about other issues, and assistance with things. The response categories for both variables range from very difficult (scored as 1) to very easy (scored as 4). The answers are reverse scored, and then additive scales were created to construct both variables. Higher values correspond to higher levels of parental alienation ($\alpha = .73$) or peer alienation ($\alpha = .80$).

School alienation was measured using five items: (1) I find studies pointless, (2) I am bored with studies, (3) I feel bad at school, (4) I want to drop out of school, and (5) I want to change schools. The response categories range from almost never applies to me (scored as 1) to almost always applies to me (scored as 5). An additive scale

was created to construct the variable of school alienation. Higher values correspond to higher levels of school alienation ($\alpha = .74$).

Neighborhood change and school change were measured using the following items: In the last 12 months, have you (a) moved to a different neighborhood/community or (b) changed schools? Respondents who had moved to a different neighborhood/community or changed schools were coded as 1, otherwise they were coded as 0 for this variable.

Losing a family member was measured using the following item: Have you experienced the death of a parent or sibling in the last 12 months? Those who experienced the death of a parent or sibling were coded as 1, otherwise they were coded as 0 for this variable.

Finally, for the propensity to use illicit substances, the following three items were led into with the sentence "In order not to be left out in the peer group": (a) smoking cigarettes is sometimes necessary, (b) drinking alcohol is sometimes necessary, and (c) smoking cannabis is sometimes necessary. Response categories range from strongly disagree (scored as 1) to strongly agree (scored as 4). An additive scale was created to construct the variable, and higher scores correspond to higher levels of propensity to use illicit substances ($\alpha = .85$).

Control Variables

The control variables included into the analyses are gender, age, religiosity, suicidal suggestion, and depression. Gender was coded as 1 for female students and 0 for male students. Age is an interval variable ranging from 13 to 17. Religiosity is measured using the following five items: (1) I believe in God, (2) My faith is important to me, (3) I pray to God on a regular basis, (4) I would be able to get support from God if I needed it, and (5) I have sought support from God when I have needed it. Response categories range from 1 (applies to me very poorly) to 4 (applies to me very well). I created an additive scale to construct the variable of religiosity with higher scores corresponding to higher level of religiosity ($\alpha = .84$). Suicidal suggestion was measured using the following three items: (1) Anyone of your acquaintances at any time has tried to commit suicide, (2) Anyone of your acquaintances has committed suicide, (3) Anyone of your friends or someone else close to you has ever tried to commit suicide. Response categories range from no (scored as 0) to yes (scored as 1). An additive scale was created to construct the variable with higher values corresponding to higher levels of suicidal suggestion ($\alpha = .76$). Lastly, even though Durkheim rejected attempts to explain human social phenomena in terms of various individual needs, desires, and tendencies ascribed to human nature by philosophical psychology (Schmaus, 2010), following a wide range of studies focusing on suicide (e.g., Bearman & Moody, 2004;

Abrutyn & Mueller, 2014b; Yildiz & Solakoglu, 2017), the variable of depression was included in the analysis. Including a psychological variable in the analysis is not thought to contradict Durkheim's arguments as he specifically said, "Every time a social phenomenon is directly explained by a psychological phenomenon, we may rest assured that the explanation is false" (Durkheim, 1982, p. 129). However, what we do here with the variable of depression is not to measure its direct effect but to control its effect when measuring the direct effects of the independent variables. To construct the variable of depression, the students were presented with 11 statements (e.g., I felt lonely, I cried or wanted to cry, I was not excited to do anything, I felt like everyone had let me down) and were asked how often during the previous week each statement applied to them. Response categories range from almost never (scored as 1) to often (scored as 4). I created an additive scale to construct the depression variable, and higher values correspond to higher levels of depression ($\alpha = .91$).

In addition to these control variables, I included three more variables in the analysis to test Hypothesis 3. These variables are the frequencies for smoking cigarettes, drinking alcohol, and smoking cannabis. The frequency of cigarette smoking is measured with the following item: How much do you smoke in a day? Response categories range from 0 to 25 cigarettes a day. The frequency of alcohol drinking is measured with the following item: How often have you drunk alcohol in the last 30 days? Response categories range from 0 to 45 times a month. The frequency of cannabis smoking is measured with the following item: How often have you used cannabis in the last 30 days? Response categories range from 0 to 45 times. Descriptive statistics regarding the dependent, independent, and control variables are displayed in Table 1.

Results

Table 2 shows the logistic regression results for suicide attempt.¹ Model 1 illustrates the effects the control variables have on adolescent suicide attempts when no other predictors are included in the model. The results indicate religiosity ($b = -0.124$; $p < .001$), suicidal suggestion ($b = .821$; $p < .001$), and depression ($b = .062$; $p < .001$) to significantly be associated with suicide attempts. Meanwhile, gender and age have no significant links with suicide attempts. Examining the predicted probabilities when each observed variable moves from its minimum value to its maximum value while holding all other variables constant at their means, it can be seen that adolescents, who are the least religious, associated most with suicidal others, and have the highest level of depression are respectively 5, 8.6, and 12.3 times more likely than those who are the most religious, have no association with suicidal others, and have the lowest level of depression, to report suicidal attempt.

¹ All the models were estimated using the program, STATA (version 15).

Model 2 shows the logistic regression results when the dependent variable is regressed on the predictors of egoistic suicide. After controlling for gender, age, religiosity, suicidal suggestion, and depression, the coefficients of parental alienation ($b = .062$; $p < .05$) and school alienation ($b = .047$; $p < .05$) are both significant and in the expected direction. However, peer alienation does not have any significant links with adolescent suicidal attempt. Thus, Hypothesis 1, which predicts that adolescents with higher levels of parental, peer, and school alienation will show higher likelihoods of attempting suicide, is supported except for peer alienation. Thus, adolescents with the highest levels of parental and school alienation were seen to be almost three times more likely to report having attempted suicide than those with the lowest level of parental and school alienation.

Table 1
Descriptive Statistics ($n=2,057$)

Variable	M	SD	Range
Dependent Variable			
Suicide Attempt	.099	.299	0-1
Control Variables			
Female	.500	.500	0-1
Age	14.357	.681	13-17
Religiosity	18.844	2.333	5-20
Suicidal Suggestion	.704	1.039	0-3
Depression	22.800	8.776	1-44
Independent Variables			
<i>Egoistic Suicide</i>			
Parental Alienation	6.231	3.211	1-20
Peer Alienation	4.794	3.175	1-18
School Alienation	10.553	4.322	2-25
<i>Anomic Suicide</i>			
Neighborhood Change	.144	.351	0-1
School Change	.130	.336	0-1
Lost a Family Member	.021	.143	0-1
<i>Fatalistic Suicide</i>			
Substance Use	3.847	1.906	1-12
Smoking Freq.	.589	2.896	0-25
Alcohol Freq.	.688	4.262	0-45
Cannabis Freq.	.141	1.861	0-45

Table 2.
Logistic Regression Models Predicting Suicide Attempt (n=2,057)

	Model 1				Model 2				Model 3			
	b	SE	Predicted Prob.		b	SE	Predicted Prob.		b	SE	Predicted Prob.	
			Min.	Max.			Min.	Max.			Min.	Max.
Control Variables												
Female	-0.062	0.173	0.059	0.056	0.106	0.181	0.053	0.058	0.051	0.179	0.053	0.056
Age	0.198	0.114	0.045	0.094	0.125	0.115	0.047	0.075	0.185	0.116	0.043	0.087
Religiosity	-0.124	0.026	0.257	0.051	-0.106	0.026	0.204	0.049	-0.111	0.027	0.214	0.049
Suicidal Suggestion	0.821	0.069	0.033	0.289	0.822	0.070	0.032	0.280	0.823	0.071	0.031	0.278
Depression	0.062	0.009	0.015	0.189	0.051	0.009	0.019	0.148	0.062	0.009	0.014	0.180
Independent Variables												
<i>Egoistic Suicide</i>												
Parental Alienation					0.062	0.024	0.041	0.122				
Peer Alienation					0.033	0.026	0.049	0.083				
School Alienation					0.047	0.019	0.037	0.105				
<i>Anomic Suicide</i>												
Neighborhood Change									0.163	0.218	0.054	0.063
School Change									0.449	0.225	0.052	0.079
Lost a Family Member									1.872	0.384	0.053	0.267
Constant	-5.262	1.754			-5.467	1.749			-5.566	1.778		
LR Chi-square	282.11				301.03				310.74			
Nagelkerke R-squared	0.269				0.285				0.294			

Table 2
Continue

	Model 4						Model 5						
	b		SE	Predicted Prob.		b	SE	Predicted Prob.		b	SE	Predicted Prob.	
				Min.	Max.			Min.	Max.			Min.	Max.
Control Variables													
Female	0.067		0.178	0.054	0.058	0.150	0.182	0.051	0.059			0.051	0.059
Age	0.158		0.115	0.046	0.083	0.126	0.116	0.047	0.075			0.047	0.075
Religiosity	-0.107	***	0.027	0.209	0.050	-0.107	0.027	0.206	0.049	***		0.206	0.049
Suicidal Suggestion	0.797	***	0.070	0.033	0.271	0.777	0.071	0.033	0.259	***		0.033	0.259
Depression	0.060	***	0.009	0.016	0.176	0.058	0.009	0.016	0.167	***		0.016	0.167
Independent Variables													
<i>Fatalistic Suicide</i>													
Substance Use	0.152	***	0.034	0.037	0.171	0.142	0.035	0.037	0.157	***		0.037	0.157
Smoking Freq.						0.050	0.020	0.054	0.168	*		0.054	0.168
Alcohol Freq.						0.027	0.014	0.054	0.165	*		0.054	0.165
Cannabis Freq.						0.017	0.035	0.055	0.112			0.055	0.112
Constant	-5.616	**	1.772			-5.166	1.787			**			
LR Chi-square	301.01	***				314.03				***			
Nagelkerke R-squared	0.285					0.297							

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed test)

Model 3 shows the results when the dependent variable is regressed over the predictors of anomic suicide. When keeping the control variables constant, the coefficients for school change ($b = .449; p < .05$) and losing a family member ($b = 1.872; p < .001$) are both positive and significant, while the coefficient for change in neighborhood has no significant association with adolescents' suicide attempt. Thus, Hypothesis 2, which predicts that adolescents who've moved to a different neighborhood, changed schools, or lost a family member will have a higher likelihood of attempting suicide, is supported for all except change in neighborhood. In this sense, adolescents who've changed schools or lost a family member are respectively 1.5 or 5 times more likely than their counterparts to report having attempted suicide.

Model 4 shows the results when the dependent variable is regressed over the predictor of fatalistic suicide. When keeping the control variables constant, the coefficient of illicit substance use ($b = .152; p < .001$) is seen to have a positive and significant relationship. Hence, Hypothesis 3, which predicts adolescents with greater propensities to use illicit substances in order not to be left out of the peer group will have a higher likelihood of attempting suicide, is supported. As can be seen from the predicted probabilities in Model 4, adolescents with the greatest tendencies toward using illicit substances in fear of being excluded from their peer group are 4.6 times more likely to report having attempted suicide compared to those with the lowest tendencies toward using illicit substances.

Research has shown illicit substance use to be a risk factor that is able to increase adolescent suicidality (Dubow et al., 1989; Bearman & Moody, 2004). Because the predictor of fatalistic suicide examined in Model 4 may include the effects of both the oppressive nature of a fatalistic state as well as substance use on adolescent suicidality, Model 5 contains the frequencies for cigarette smoking, alcohol drinking, and cannabis smoking in the analysis in order to avoid spuriousness. After including the frequencies for the variables of cigarette smoking ($b = .05; p < .05$), alcohol drinking ($b = .027; p < .05$), and cannabis smoking, the predictor of fatalistic suicide remained significant ($b = .142; p < .001$) with very little sign of mediation. Thus, adolescents who have the highest tendencies to use illicit substances for fear of being excluded from their peer group are still more than 4 times more likely to report having attempted suicide than those with the lowest tendencies to use illicit substances. This means that this variable directly measures the effect of the oppressive nature a fatalistic state has on adolescent suicidality compared to the effect of substance use. Therefore, Hypothesis 3 is still supported.

Discussions and Conclusion

In this study, I addressed how well Durkheim's theoretical arguments on suicide still apply more than a century later in a religiously and culturally different context

than its originating framework. To do this, I operationalized each form of suicide (i.e., egoistic, anomic, and fatalistic) as independent constructs with relevant predictors and assessed their validity in relation to gender, age, religiosity, suicidal suggestion, and depression. Hypotheses regarding each form of suicide were strongly supported with the exceptions of peer alienation and change in neighborhood.

In this regard, consistent with the Durkheimian theorization, adolescents who (a) are strongly alienated from their parents or schools, b) changed schools or lost a family member, or (c) have greater tendencies to use illicit substances for fear of being excluded from their peer group have been shown to have a higher risk of attempting suicide.

In addition to the expected findings, the reason for the insignificant link between peer alienation and attempted suicide might be that adolescents may easily break bonds with their peers to establish new bonds with others who they feel are more akin to their worldviews during adolescence. Also, the risks of peer alienation on suicidality resulting from the easily breakable bonds with peers might be moderated by bonds with pro-social others such as parents and school. As Drake et al. (2014) argued, children who are securely attached to their parents compared to their insecurely attached counterparts (e.g., peers) tend to have fewer behavioral problems and to be more socially competent. During adolescence, school also becomes the primary formal organization that can affect adolescents' course of life by providing the context for social interactions, one-on-one communication, cultivation of interpersonal skills, and self-improvement (Henry & Slater, 2007).

In addition, the reason for the insignificant association between change in neighborhood and attempted suicide might be that a change in neighborhood may not be as important as a change in schools for adolescents. More specifically, a change in neighborhood in Turkey generally means an adolescent unwillingly breaks bonds with their neighbors, not their existing friends. If a change in neighborhood does not require adolescents to also change their schools, this means that they do not have to worry about finding new friends, establishing new ties, or getting used to the rules of a new school. Even if they had good connections with their neighbors (probably more valid to an adult than an adolescent), their bonds to pro-social others might easily moderate the negative effects of this unintentional loss. Therefore, they do not have to experience an intensely stressful, chaotic, and unpredictable situation and are less likely to use suicide as a coping mechanism to get rid of this intolerable situation.

In addition to the key findings, this study has also found gender and age to not be significant predictors of adolescents' attempted suicide. Even if Durkheim (1951) and many following studies found attempted suicide to be higher among women than men (Dubow et al., 1989; Canetto & Sakinofsky, 1998; Abrutyn & Mueller, 2014b) and

suicide rates to increase with age (Dubow et al., 1989; Yildiz & Solakoglu, 2017), the current study has shown gender and age to not be significant predictors of adolescents' attempted suicide.

To the best of my knowledge, the main contribution of this study is that it is the first study to investigate Durkheim's theory of suicide and the three etiological forms of suicide (i.e., egoistic, anomic, and fatalistic) in one single paper. While many other studies have addressed one or two forms of suicide within Durkheim's typology of suicide (Stack, 2004; Abdel-Khalek, 2004; Leenaars, 2004; Kushner & Sterk, 2005; Hodwitz & Frey, 2016), most have ignored fatalistic suicide, probably due to the unavailability of relevant data. For example, similar to what I found for egoistic suicide in the current study, Thorlindsson and Bjarnason (1998) found youths who are strongly integrated into their families to be less likely to succumb to suicidality. In other words, they demonstrated the protective nature of social integration against suicidality and validated Durkheim's theory. In addition, Hodwitz and Frey (2016) focused on anomic suicide and, unlike the current study, examined whether marriage and divorce have any role in promoting the occurrence of an anomic state. They found supporting evidence for Durkheim's original theory and showed that, while marriage represents regulation of desires for males, divorce represents deregulation of desires for both males and females. Lastly and similar to the findings of the current study that has demonstrated a close relationship between fatalistic social integration within peer groups and the likelihood of attempting suicide, Braswell and Kushner's (2012) study as one of the few addressing fatalistic suicide showed how fatalistic social integration in the military can be linked to high rates of suicide, especially with respect to the military's masculine social norms toward suicide.

Even though some have argued taking Durkheim's hypotheses from the 19th century and expecting them to be reasonable bases for empirical investigation in the 21st century to no longer be realistic (Wray et al., 2011), this study and the above-mentioned studies show the durability of Durkheim's theory; this is truly impressive and validates the Durkheimian perspective of suicide in the context of Turkey, which is different than the theory's place of origin. Because suicide has been a fairly avoided and ignored topic for academic studies in Muslim-populated countries due to cultural and religious reasons, providing insights about the suicidal behaviors of adolescents in a Muslim-populated country will strongly contribute to the literature on suicidology.

Several limitations of this study must be noted. First, the models tested here did not incorporate altruistic suicide due to data restrictions. The data here do not have appropriate variables for a proper measurement of altruistic suicide. Moreover, although some rare cases may truly fit the Durkheimian conceptualization of an altruistic suicide as indicated by Mueller and Abrutyn (2016), the concept is not flexible enough to be empirically

useful. Second, the responses to the key variables are self-reported assessments from the study's participants. Suicide is heavily condemned in Turkey due to religious, community, and family sanctions. Therefore, some participants might be unwilling to disclose their suicidal tendencies and may have failed to respond accurately to the questions. Third, this study focused on a sample of adolescents residing in the biggest and most populated city of Turkey. Therefore, it is unclear to what extent the findings are generalizable to other samples. Future research with a larger community of adolescent samples from diverse backgrounds such as rural Turkey will be helpful in further understanding the correlates of adolescent suicidality. Fourth, while the dichotomous measure of suicide attempt has been previously used by researchers (Bernburg et al., 2009; Yildiz & Solakoglu, 2017), more well-constructed measures will provide a better capture of adolescents' suicidal behaviors. Finally, I examined suicide attempts to validate the three etiological forms of suicide rather than official records of successful suicides. In my defense, attempted suicide must be said to fit Durkheim's definition of suicide as a behavior except for the part "falling short of actual death" (1951, p. 44). Also, consensus exists that attempted suicide is one of the best predictors of both a repeat attempt and eventual successful suicide (Bernburg et al., 2009).

Despite these limitations, the results of the present study are generally consistent with other studies focusing on adolescent suicidality (Pescosolido & Georgianna, 1989; Bearman, 1991; Thorlindsson & Bjarnason, 1998; Berkman et al., 2000; Bearman & Moody, 2004; Thorlindsson & Bernburg, 2004; Abrutyn & Mueller, 2014b). Over 100 years later, Durkheim's theory still appears applicable. Still to this day, adolescents who are weakly integrated (egoistic) into their social circles or weakly (anomic) or strongly regulated (fatalistic) by society appear to be most at risk for suicidal behaviors. The findings from this study underscore the importance of developing secure relationships with pro-social others (family, peer, and school) that will thus provide adolescents with social mechanisms they can consult for advice when needed. The findings also point to the need to recognize that associating with others who are suicidal (suicidal suggestion) and psychological risk factors should be considered to prevent suicide risks for adolescents. In this context, the most efficient ways to prevent suicide among adolescents would be to organize prevention programs that are designed to strengthen adolescents' social support networks and provide resources to cope with stress (Dubow et al., 1989) and to have social skills training programs designed to equip them with the necessary skills, knowledge, and self-efficacy to handle negative or unexpected life events.

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References

- Abdel-Khalek, A. M. (2004). Neither altruistic suicide, nor terrorism but martyrdom: A Muslim perspective. *Archives of Suicide Research, 8*, 99–113.
- Abrutyn, S. (2019). Toward a general theory of anomie: The social psychology of disintegration. *European Journal of Sociology, 60*(1), 109–136.
- Abrutyn, S., & Mueller, A. S. (2014a). The socioemotional foundations of suicide: A microsociological view of Durkheim's suicide. *Sociological Theory, 32*(4), 327–351.
- Abrutyn, S., & Mueller, A. S. (2014b). Are suicidal behaviors contagious in adolescence? Using longitudinal data to examine suicide suggestion. *American Sociological Review, 79*, 211–227.
- Abrutyn, S., & Mueller, A. S. (2018). Toward a cultural-structural theory of suicide: Examining excessive regulation and its discontents. *Sociological Theory, 36*(1), 48–66.
- Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency, 38*, 319–361.
- Bearman, P. S. (1991). The social structure of suicide. *Sociological Forum, 6*(3), 501–524.
- Bearman, P. S., & Moody, J. (2004). Suicide and friendships among American adolescents. *American Journal of Public Health, 94*(1), 89–95.
- Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine, 51*, 843–857.
- Bernburg, J. G., Thorlindsson, T., & Sigfusdottir, I. D. (2009). The spreading of suicidal behavior: The contextual effect of community household poverty on adolescent suicidal behavior and the mediating role of suicide suggestion. *Social Science & Medicine, 68*, 380–389.
- Braswell, H., & Kushner, H. I. (2012). Suicide, social integration, and masculinity in the U.S. military. *Social Science & Medicine, 74*, 530–536.
- Canetto, S. S., & Sakinofsky, I. (1998). The gender paradox in suicide. *Suicide and Life-Threatening Behavior, 28*(1), 1–23.
- Cohen-Sandler, R., Berman, A. L., & King, R. A. (1982). Life stress and symptomatology: Determinants of suicidal behavior in children. *Journal of the American Academy of Child Psychiatry, 21*, 178–186.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, 95–120.
- Drake, K., Belsky, J., & Pasco Fearon, R. M. (2014). From early attachment to engagement with learning in school: The role of self-regulation and persistence. *Developmental Psychology, 50*(5), 1350–1361.
- Dubow, E. F., Kausch, D. F., Blum, M. C., Reed, J., & Bush, E. (1989). Correlates of suicidal ideation and attempts in a community sample of junior high and high school students. *Journal of Clinical Child Psychology, 18*(2), 158–166.
- Durkheim, E. (1951). *Suicide*. The Free Press.
- Durkheim, E. (1982). *The rules of sociological method*. The Free Press.
- Fuligni, A. J., & Eccles, J. S. (1993). Perceived parent-child relationships and early adolescents' orientation toward peers. *Developmental Psychology, 29*, 622–632.
- Hawton, K., O'Grady, J., Osborn, M., & Cole, D. (1982). Adolescents who take overdoses: Their characteristics, problems, and contacts with helping agencies. *British Journal of Psychiatry, 140*, 118–123.

- Henry, K. L., & Slater, M. D. (2007). The contextual effect of school attachment on young adolescents' alcohol use. *Journal of School Health, 77*(2), 67–74.
- Hjern, A., Lindblad, F., & Vinnerljung, B. (2002). Suicide, psychiatric illness and social maladjustment in intercountry adoptees in Sweden: A cohort analysis. *The Lancet, 360*, 443–448.
- Hodwitz, O., & Frey, K. (2016). Anomic suicide: A Durkheimian analysis of European normlessness. *Sociological Spectrum, 36*(4), 236–254.
- Hughes, M., & Gove, W. R. (1981). Living alone, social integration, and mental health. *American Journal of Sociology, 87*(1), 48–74.
- Johnson, J. G., Cohen, P., Gould, M. S., Kasen, S., Brown, J., & Brook, J. S. (2002). Childhood adversities, interpersonal difficulties, and risk for suicide attempts during late adolescence and early adulthood. *Archives of General Psychiatry, 59*(8), 741–749.
- Kushner, H. I., & Sterk, C. S. (2005). The limits of social capital: Durkheim, suicide, and social cohesion. *American Journal of Public Health, 95*(7), 1139–1143.
- Leenars, A. A. (2004). Altruistic suicide: A few reflections. *Archives of Suicide Research, 8*, 1–7.
- Lester, D. (2006). Suicide and Islam. *Archives of Suicide Research, 10*, 77–97.
- Mueller, A. S., & Abrutyn, S. (2016). Adolescents under pressure: A new Durkheimian framework for understanding adolescent suicide in a cohesive community. *American Sociological Review, 81*(5), 877–899.
- Niederkrotenthaler, T., Floderus, B., Alexanderson, K., Rasmussen, F., & Mittendorfer-Rutz, E. (2012). Exposure to parental mortality and markers of morbidity, and the risks of attempted and completed suicide in offspring: An analysis of sensitive life periods. *Journal of Epidemiology and Community Health, 66*(3), 233–239.
- Pedahzur, A., Perlinger, A., & Weinberg, L. (2003). Altruism and fatalism: The characteristics of Palestinian suicide terrorists. *Deviant Behavior, 24*, 405–423.
- Perkins, D. F., & Hartless, G. (2002). An ecological risk-factor examination of suicidal ideation and behavior of adolescents. *Journal of Adolescent Research, 17*, 3–26.
- Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion: Toward a network theory of suicide. *American Sociological Review, 54*(1), 33–48.
- Potter, L. B. (2001). The influence of geographic mobility on nearly lethal suicide attempts. *Suicide and Life-Threatening Behavior, 32*, 42–48.
- Schmaus, W. (2010). Durkheim and psychology. In I. Pyysiainen (Ed.), *Religion, economy, and cooperation* (pp. 99–126). De Gruyter.
- Stack, S. (2004). Emile Durkheim and altruistic suicide. *Archives of Suicide Research, 8*, 9–22.
- Thorlindsson, T., & Bernburg, J. G. (2004). Durkheim's theory of social order and deviance: A multi-level test. *European Sociological Review, 20*(4), 271–285.
- Thorlindsson, T., & Bjarnason, T. (1998). Modeling Durkheim on the micro level: A study of youth suicidality. *American Sociological Review, 63*(1), 94–110.
- Wray, M., Colen, C., & Pescosolido, B. (2011). The sociology of suicide. *Annual Review of Sociology, 37*, 505–528.
- Yildiz, M., & Solakoglu, O. (2017). Strain, negative emotions, and suicidal behaviors among adolescents: Testing general strain theory. *Youth and Society, 51*(5), 638–658.
- Yukse, D. A., & Solakoglu, O. (2016). The relative influence of parental attachment, peer attachment, school attachment, and school alienation on delinquency among high school students in Turkey. *Deviant Behavior, 37*(7), 723–747.

