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Perceived Social Support and Suicidal Ideation: The Moderating Role of thwarted Belongingness and Burdensomeness

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Suicide is a global problem whose causes have not been fully understood yet. Clearly, suicide is the result of complex interactions of various factors, yet Asian studies have reported social stresses and interpersonal problems as more important contributors. The purpose of the present study is to develop a model to predict suicidal ideations based on perceived social support, thwarted belongingness, and perceived burdensomeness as the variables. The research method is correlational and the statistical population consists of single 20-30year-old girls in Isfahan City chosen by multistage clustering sampling. The sample size included 239 participants and the research tools were the multidimensional scale of perceived social support (Zimet, Dahlem, Zimet & Farely, 1988), and the suicidal ideations (Reynolds, 1987-1988 quoted by Beaumont, 1994) questionnaires. Studying the general fitting of the recommended model was performed by AMOS-22 statistical software. The research results indicated that the social support of family predicts suicidal ideations through thwarted belongingness and perceived burdensomeness directly and indirectly, and friends' support predicts it indirectly

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through thwarted belongingness. However, the relationship between support of significant others and suicidal ideations was not verified. The results also suggested the relatively different role of family and friends in development of suicidal ideations, but generally increase in the social support of family and friends can inhibit suicidal ideations.

Keywords: interpersonal needs, suicidal ideation, perceived social support

Suicide is one of the painful problems of the human being which involves a wide range of suicidal ideations, suicide plan, and suicidal attempt until commitment of suicide. From the 20th century until recent years of the 21st century, the total number of suicide has been about 12 cases out of 100.000, where today suicide is known as the 10th cause of death (Sadock, Sadock, & Ruiz, 2015). Although the suicide rate increases by age, it is increasing in the youth. Suicide is the third cause of death in 15-24-year-olds followed by accidents and murder (Sadock et al., 2015). From about 900.000 suicides all over the world during a year, near 200.000 of them are committed by teens and youths (Pajoumand et al., 2012).

The statistics in Iran show an ascending rate of suicide especially in girls and women. Further, a study of the suicide statistics of females in 2007 revealed that Iran ranks the third after China and India (Ajdacic Gross et al., 2008). This suggesys that it is necessary to pay special attention to suicide especially in young girls and their motivations.

Many studies have been conducted on the cause of suicide and many theories presented accordingly. One of the common motivations of suicide is death but some experts believe that suicide is a kind of reverse homicide caused by one's anger toward another (Sadock et al., 2015). Shneidman believes that suicide is a reaction to intolerable psychological pain; Durkheim

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emphasized social isolation; while Beck and Abramson noted the role of disappointment (Klonsky & May, 2015). Other researchers consider reasons including escape, communications, changes in one's environment, and confronting an intolerable mental condition (May & Klonsky, 2013).

The American and European studies often suggest that 90% of suicides can be related to one's previous psychological disorders, while Asian researchers believe in social stresses and interpersonal problems. Some studies in India have demonstrated that half of the suicide cases are not related to psychological disorders (Parkar, Dawani & Weiss, 2016). Concerning the importance of society, it is said that an individual in Asian cultures is seen as a committed and obliged person to others, where group goals are prioritized to individual needs, beliefs, and goals (Kim, Sherman & Taylor, 2008). According to the different theorists in suicide field, consideration of sociocultural variables is necessary to understand suicide, though the mechanisms recommended for the relationship between social communications and suicide in theories are different. Durkheim emphasizes social isolation and highlights the role of family. Also, the social bio-models have noted risky behaviors, family role, and social support networks since then (Amitai & Apter, 2012). These theories suggest the role of social solidarity in increasing mental health and preventing suicide. The key role of family as a social support system is frequently seen in different Asian cultures for Asian-Americans as family is the first source of security better than the society (Wong, Uhm & Li, 2012).

In addition, several studies have indicated that social support makes an individual more flexible toward suicidal ideation, while some other studies suggest that social support is associated with reduction of suicide rate which acts as a protective factor against

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suicide when confronting negative events in the life (Kleiman & Liu, 2013). Further, researchers have concluded that after controlling depression, decrease in social support of family predicts suicidal ideations positively while social support of friends does not predict suicidal thoughts (Hollingsworth, 2014). Social isolation, retreat from society, insufficient social support, and intense feeling of loneliness are significantly associated with the suicide risk (Hollar, 2010). There are strong theoretical supports in addition to experimental evidence favoring the role of social support. An example is increase in thwarted belongingness due to the presence of social support which is negatively related to the suicide risk in the Joiner's suicide theory (Kleiman & Liu, 2013). This theory was developed under the title of interpersonal psychological theory of suicide (Joiner, Brown & Wingate, 2005) with the aim of presenting a theoretical model for suicide. This theory is based on the hypothesis that people die by suicide as they find the capability and desire to die. The basic core of suicidal behaviors is composed of three constructs including thwarted belongingness as well as perceived burdensomeness which are related to the desire for suicide, with the last construct being acquired capability which is related to one's capability for suicide (Hill & Pettit, 2014).

The thwarted belongingness can be defined as low level of social support perceived by others, feeling of miscommunications, and limited relations with others or isolation (Hill & Pettit, 2014). It includes two main elements: isolation and absence of reciprocal care (Ma, Batterham, Calear & Han, 2016). The Joiner's interpersonal theory states the hypothesis that the thwarted belongingness is an effective-dynamic cognitive state and not a static state affected by inter- and intrapersonal factors such as experience of family conflict, living alone, low social

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support and the predisposition to interpret others' behavior as rejection (Ma et al., 2016). Based on this theory, a person's thwarted belongingness will change over time and can protect them against suicide as a basic need. It is the very reason of high rate of suicide in singles and divorced people (Hollar, 2010).

Another construct is perceived burdensomeness. According to the Joiner's interpersonal needs theory, the perceived burdensomeness is caused by self-hate and the feeling of liability (Ma et al., 2016). This comes from the fact that one is really a burden to others, but burdensomeness can be just an annoying perception existing in a potential suicidal mind while their family and close ones do not consider him or her as a burden. Burdensomeness can be financial, emotional, or situational where others have to take care of one (Van Orden, Witte, Gordon, Bender & Joiner, 2008; Opperman, Czyz, Gipson & King, 2015). Similar to the thwarted belongingness, the perceived burdensomeness is a dynamic cognitive state influenced and developed by risk factors such as unemployment as well as medical or health problems (Ma et al., 2016).

Some studies suggest that although perceived burdensomeness increases suicidal ideations in both genders, the thwarted belongingness only increases suicidal ideations in females. Further, the thwarted belongingness in females and the perceived burdensomeness are interrelated (Donker, Batterham, Van Orden & Christensen, 2014). Other studies indicate that the thwarted belongingness is related to the suicidal ideations and the completed suicide (Selby et al., 2010). In addition, researchers suggest that social support of family and friends negatively predicts the thwarted belongingness (Hollingsworth, 2014).

Since suicide studies in Iran are mostly based on descriptive studies and considering the theories presented, a more useful

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framework about the reason of suicidal tendencies is necessary. Further, considering the collectivist culture and importance of interpersonal relations in Iranian society as an Asian subset, the Joiner's interpersonal theory can be appropriate and useful to explain part of suicidal tendencies in Iranian society. Joiner emphasized the relationship between thwarted belongingness and perceived burdensomeness, and both his theory and results of other studies highlight the relationship between social support and reduction in suicide, thwarted belongingness and perceived burdensomeness. According to this theoretical and research background, the purpose of the present research is to study the fitting of a model based on the role of social support, thwarted belongingness, and perceived burdensomeness in order to explain suicidal ideation in of 20-30-year-old women in Isfahan City.

Method

The statistical population of the present research consisted of single 20-30-year-old girls in Isfahan City. The inclusion criteria were 20-30-year-old girls with at least 8th grade education without any acute physical illness. The sampling method was multistage clustering (but questionnaires were given to the participants due to moral considerations and sensitivity of the subject). The sample size included 260 girls given the variance of the considered characteristics (Houman, 2010). Before data analysis, the invalid questionnaires with more than 10 unanswered items were removed where total number of samples was reduced from 260 to 239. The developed model was tested by structural equation modeling (SEM) method considering the nature of the concepts presented in this research. The research method was of correlation type and the main problem of the research was to develop a model to predict suicidal ideations based on these

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variables: perceived social support, thwarted belongingness, and perceived burdensomeness.

Instrument

Multidimensional Scale of Perceived Social Support (MSPSS)

This scale was developed by Zimet et al., (1988) to measure the range of one's perceived social support from three sources: significant others (SO) including questions 1, 2, 5 and 10; family (FA) including questions 3, 4, 8 and 11; and friends (FR) including questions 6, 7, 9 and 12. The MSPSS is a self-report, short, simple and executable questionnaire including 12 questions with 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). The MSPSS has proved to be a psychometrically powerful scale across different samples including powerful internal validity and reliability, appropriate retest, and powerful factor validity (Zimet et al., 1988; Wongpakaran, Wongpakaran & Ruktrakul, 2011). The reliability of the questionnaire was verified by some experts. The Cronbach alpha coefficient of this questionnaire in the present research has been .90 and .91 for SO and FA/FR subscales respectively.

Interpersonal Needs Questionnaire (INQ)

It refers to the scale for interpersonal needs (items 10, 12, 15, 18 and 25) used in recent studies (Hill et al., 2015). This scale has been implemented on different populations (Marty, Segal, Coolidge & Klebe, 2012). The 18-question version of the scale includes 18 questions with 7-point Likert scale. It is a two-component self-report scale including the perceived burdensomeness (items 1 to 9) and the thwarted belongingness (items 10 to 18). Note that the questions 5, 9, 10, 11, 13, 16, 17 and 18 in this scale are scored inversely. Higher scores reflect

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higher levels of thwarted belongingness and perceived burdensomeness. The reliability of the questionnaire was verified by some experts. The Cronbach alpha coefficient of this questionnaire has been .88 and .79 for perceived burdensomeness and thwarted belongingness subscales, respectively.

Suicidal Ideation Questionnaire (SIQ)

This questionnaire was created by Reynolds in 1987-1988 (Beaumont, 1994). The scale includes 30 questions measuring suicidal ideations. The questions are scored on a 7-point scale to capture the frequency of each ideation in the last month. The scores for each item lie within a range from zero (I have never thought about it) to six (I often think about it every day). Higher scores reflect higher intensity of suicidal ideations. Some studies have examined the internal consistency and all of them had gained a reliability coefficient of average to more than .9. In 1988, Reynolds reported the reliability coefficient of .72 for a retest within 4 weeks. Such studies introduce the SIQ as a reliable scale to measure suicidal ideations (Beaumont, 1994). The reliability of the questionnaire was verified by some experts. The Cronbach alpha coefficient of this questionnaire in the present research has been .96.

Results

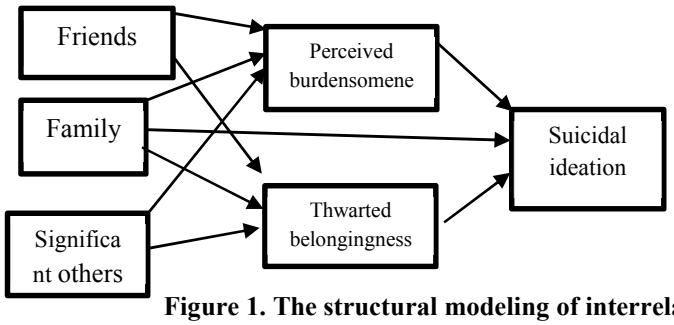


Figure 1. The structural modeling of interrelationships between dimensions of perceived social support, thwarted belongingness, perceived burdensomeness, and suicidal ideation

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The correlations between the variables of the study are presented in Table 1.

Table 1
The Correlations between the Variables of the Study

Variables	1	2	3	4	5	6
1. family	-					
2. friends	.30**	-				
3. significant others	.56**	.43**	-			
4. thwarted belongingness	- .37**	- .33**	- .33**	-		
5. perceived burdensomeness	- .36**	- .20**	- .18**	.32**	-	
6. suicidal ideation	- .31*	- .13**	- .15*	.31**	.39**	-

*p<.05 **p<.01

According to Table 1, all of the correlations between the variables have been significant. To analyze the structural model of the interrelations between dimensions of perceived social support thwarted belongingness, perceived burdensomeness, and suicidal ideation, path analysis was used. Standardized direct effects of the model of the study are presented in Table 2.

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Table 2

Standardized Direct Effects of the Model of the Study

Paths		Estimates	Standard error
Friends	perceived burdensomeness	- .08	.09
Friends	thwarted belongingness	- .22*	.10
Family	perceived burdensomeness	- .31**	.10
Family	thwarted belongingness	- .26**	.11
significant others	perceived burdensomeness	.10	.10
significant others	thwarted belongingness	- .08	.11
perceived burdensomeness	suicidal ideation	.28**	.26
Thwarted belongingness	suicidal ideation	.17**	.25
Friends	suicidal ideation	.01	.38
Family	suicidal ideation	- .17*	.46
Significant others	suicidal ideation	.04	.41

*p<.05 **p<.01

Based on Table 2, the direct effects of friends on thwarted belongingness, family on perceived burdensomeness and thwarted belongingness, perceived burdensomeness and thwarted belongingness on suicidal ideation, and family on suicidal ideation, were significant. The other direct effects of the model, however, were not significant and so we removed their paths from the model. The results of the investigation of fitness of the final model of the study are presented in Table 3.

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Table 3
Fitness Indices for the Final Model of the Study

Fitness indexes	Primary model	Final Model fitness	Appropriate range for position of fitness
CMIN	10.55*	2.82**	insignificant value
NFI	.97	fitness	
RFI	.83	.98	> .90
IFI	.98	fitness	
TLI	.87	.92	> .90
CFI	.97	fitness	
RMSEA	.10	.99	> .90
		fitness	
		.97	> .90
		fitness	
		.99	> .90
		fitness	
		.04	< .05
		fitness	

*P = .014, **P = .014

According to the results of Table 3, all fit indices in the primary model have been weaker than those of the final modified model. The fit indices especially RMSEA improved significantly through modification of the model. Based on the results of Table 3, fitness of the final model of the study has been confirmed. The model with its path coefficients is presented in Figure 2. Also, the standardized indirect effects of the model are presented in Table 4.

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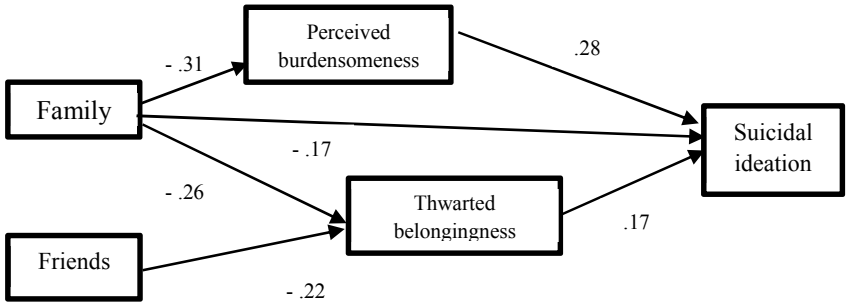


Figure 2

The final model of the interrelationships between dimensions of perceived social support, thwarted belongingness, perceived burdensomeness, and suicidal ideation

Bootstrap method with 1000 re-sampling (Preacher, Hayes, 2008) was used to investigate the size and significance of indirect effects of the model. The results of this analysis are presented in Table 4.

Table 4

Standardized Indirect Effect of the Model of the Study

paths		Estimates	Upper bound	Lower bound	significant
Family	Suicidal ideation	- .15	-.10	-.22	.001
Friends	Suicidal ideation	- .03	-.01	-.07	.005

Results of Table 4 shows that the lower and upper extent of all the model indirect effects is negative and doesn't include zero and all these effects are significant($p<.01$). The upper extent in Table 4 indicates the greatest and the lower extent indicate the smallest rate of indirect effect in these samples.

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Based on the model presented in figure 2 and the results of Table 4, family and friend social support, indirectly affect suicidal ideation through thwarted belongingness and perceived burdensomeness. Thus, we can consider thwarted belongingness and perceived burdensomeness as mediator variables in the relationship between family and friend social support, with suicidal ideation.

Discussion

The present research studies the relationship between the perceived social support and suicidal ideations with the mediating role of thwarted belongingness and perceived burdensomeness in 20-30-year-old girls. The research results revealed that social support of family predicts suicidal ideations directly and indirectly through thwarted belongingness and perceived burdensomeness, and friends support predicts it indirectly through thwarted belongingness and perceived burdensomeness. However, the relationship between significant others and suicidal ideations was not verified with the mediating role of thwarted belongingness and perceived burdensomeness nor with indirect effect. The results of the present research suggest the relatively different role of family and friends in development of suicidal ideations. This signifies that decrease in family support causes thwarted belongingness and increases perceived burdensomeness, while decrease in friends' support reinforces suicidal ideations only through increasing thwarted belongingness. The results of the present research are in line with the findings of Hollingsworth et al. (2018), Rashid et al. (2016), Donker et al. (2014), Hollingsworth (2014), Kleiman & Liu (2013), Selby et al. (2010), Hollar (2010), and Kerr, Preuss & King (2006).

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Social support originates in the family and past effects are reinforced by age, support from friends and significant others. According to experts, social support is a protective factor against suicide caused by negative events in life (Kleiman & Liu, 2013). However, since social support needs interpersonal communications, the quality of social support function also depends on the cultural background of the society in terms of social communications. People in all cultures have social support, but how they seek for social support is different across cultures. People ask for social support with less caution or inhibition in individualist cultures which helps their health. In contrast, people are less eager to share their personal problems with others in collectivist cultures because they believe that they will become a burden to their social networks. Asians use social support to cope with stress but in a different way from their western counterparts; it is through the social support without disclosing or discussing one's problems. In such an implicit social support, one can obtain a comfortable sense from social support without any concern about communication consequences such as embarrassment due to explicit use of social support (Kim et al., 2008). Such cultural differences in norms can affect the quality of using and receiving social support by people.

The results obtained about the role of the mediating factors are in line with interpersonal psychological theory of suicide. Joiner believes that the most dangerous form of suicide is when both thwarted belongingness and perceived burdensomeness exist simultaneously (Van Orden et al., 2010). Thwarted belongingness as a fundamental motive in mankind exists in all humans and in all cultures. It means that although some people try to satisfy their sense of belongingness, but some obstacles may prevent the satisfaction with this sense. Thwarted belongingness occurs in

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those with limited social networks, those who have relationships with family and friends, but they do not consider it as a close relationship. The results suggested that both decrease in family and friends support can be associated with suicidal ideations through increase in thwarted belongingness. Therefore, the sense of belongingness can provide the desire for affiliation, love, relationships, and friendships with others in addition to one's support to confront the stresses causes by routine life problems; the person knows that these people (family and friends) can help them when problems arise and protect him or her against what takes the hope of living from them. This result of the research is in line with findings of a research about the relationship between thwarted belongings and reduction of social support (Joiner et al., 2005) and increase in suicide (Selby et al., 2010).

Considering perceived burdensomeness, based on manuscripts of those who committed suicide, Joiner et al concluded that these people ended their life because they did not want to be a burden to others. The perceived burdensomeness caused feeling of being defective on the one hand and owing others on the other hand. Such feelings result in a kind of self-hate and therefore increases the tendency to suicide. Other researches have also revealed a strong relationship between perceived burdensomeness and suicidal ideations (Garza & Pettit, 2010). The results of this research suggested that perceived burdensomeness is caused only by decrease in family support and not by reduction in friend's support. Independence from others is considered a positive characteristic in most societies. On the other hand, due to affinity to each other in collectivist societies and being concerned about the community's judgment and perceived burdensomeness, people are less likely to seek for others' support. Further, since family is responsible for financial and materialistic support in

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addition to emotional support, it has the required characteristics to create perceived burdensomeness more than other social networks do especially; when an individual is unable to select family and its members while selection power grows towards friends and one can cut or decrease the relationship to the lower level if it is not satisfying and supportive. Therefore, it is natural that the perceived burdensomeness in Iranian collectivist society is mostly related to family social support (and not friends) especially in girls who have more attachment to the family. Other feelings of decrease in social support may also be effective especially if one's conditions are complicated with factors such as unemployment, illness, and family contradictions (Ma et al., 2016). Culture can be considered effective to explain this result: people in collectivist societies less ask for social support from their family because they believe that can result in increase in perceived burdensomeness. This, in turn, can have a positive relationship with committing suicide according to previous research (Van Orden et al., 2010).

Totally, the results of the present research verify the Joiner's theory about suicide in the studied sample, where suicide in the studied society can be a reaction to interpersonal challenges. Perceived burdensomeness and thwarted belongingness to the Asian collectivist culture and its emphasis on group cohesion can be harmful and contribute to suicide. Therefore, enhancing thwarted belongingness through increasing social support in family and friend's level in addition to decrease in perceived burdensomeness in family can be a recommendation to decrease people's suicidal ideations. However, judging the theory that the harmful effects of interpersonal relationships can be mostly related to the Asian culture should be further researched in different societies.

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Recommendation and Limitations

The research results indicated that decrease in social support of family and friends through thwarted belongingness and perceived burdensomeness can cause occurrence or intensification of suicidal ideations. Since suicidal ideations are the harbingers of suicide commitment, they can be reduced through enhancing social support of the family and friends to raise thwarted belongingness in people and decrease perceived burdensomeness. Therefore, mental health experts are recommended to extend the range of people evaluating who commit suicide to include family and friends. Consideration of one's social network and increasing social support through family and friends are strategies recommended to decrease suicidal ideations. Since according to Joiner, perceived burdensomeness and thwarted belongingness are a kind of cognitive distortion and many studies have suggested that they will grow in divorced, unemployed or physically sick people, it can be expected that correct therapeutic techniques help detect such distortions and detect hidden factors in them in order to decrease or eliminate suicidal ideations.

The present research had some limitations. First, the study has been of correlational type; therefore, the observed relationships do not necessarily suggest existence of causal relationships. Further, the research sample included single 20-30-year-old girls; therefore, the results cannot be generalized to other groups (men and married people). On the other hand, the variable used in this research was suicidal ideations which cannot be generalized to those who committed suicide. Thus, it is recommended to repeat the research for those who committed suicide.

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