

Psychosocial predictors of barriers to cervical cancer screening among Iranian women: the role of attachment style and social demographic factors

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Key words

Attachment • Screening barriers • Cervical cancer

Summary

Objectives. Despite advances in screening and treatment during past several Decades, cervical cancer remains a major health problem for Iranian women. Recent researches have focused on factors related to development of health behavior in an effort to design effective early interventions. The current study aimed to investigate the role of attachment styles on cervix cancer screening barriers among women of BandarAbbas-Iran.

Methods. In an analytic-cross sectional study, 681 women aged 21-65 referring to health centers were selected randomly and after completing written informed consents were investigated by Revised Adult Attachment Scale (RAAS) (Collins and Read), Pap smear screening barriers and demographic data questionnaire. The data were analyzed by Pearson correlation coefficient, linear regressions and chi-square test.

Results. The results showed significant association between attachment styles and screening barriers. There was a negative significant relation between secure attachment style and screening barriers and there was a positive significant association between insecure attachment style (anxiety and avoidant) and screening barriers. The regression analysis indicated that insecure attachment style (avoidant) were predictors of barriers to the Pap smear screening test in this regard. There was a significant association between age and residential area and participation in Pap smear test.

Conclusions. Insecure attachment style is associated with hazardous risk behaviors and these results can be useful for health service providers in preventive planning of screening and identification of people susceptible to risk and the design of the intervention.

Introduction

Cervical cancer is a global health problem (Population Reference Bureau and Alliance for Cervical Cancer Screening, 2004). According to the World Health Organization (2009) cervical cancer is the second biggest cause of female cancer mortality worldwide. Not only would cervical cancer kill 288000 women every year, but 510000 would be diagnosed annually. Nearly 80% of women suffering from cervical cancer live in developing countries [1]. According to the cancer registration report, this cancer is reported about 7.1% showing the importance of cervix cancer among women cancer in Iran [2]. Invasive cervix cancer can be prevented because it has a long premalignant stage, second the treatment of pre-invasive lesion is effective and third screening cytology of cervix cancer including Pap smear are available to the public [3]. The proposed protocol for cervix cancer screening by USA cancer association in 2012 was performing Pap smear each 3 years among women aged 21-65 year old. This experiment should be done each 1-3 year among the women being active sexually [4]. Now, screening and cervix cytology (Pap smear) is one of the most effective and cheapest methods for cervix

cancer screening [5]. According to the high prevalence of cervix cancer among women, high diagnosis of Pap smear test and its easy application, it is expected that all women refer for regular test. Unfortunately, despite Pap smear test, the mortality rate of cervix cancer is not reduced considerably in Iran. Thus, the identification of the factors leading into the participation or non-participation in health-related behaviors can lead into the reduction of health weak behaviors. In the previous studies, some important variables of these decisions are identified. One of the variables is socio-economic variables: The people with better education and the people with the parents of high socio-economical conditions are more inclined to participate in healthy behaviors [6, 7]. In various researches, the role of psychological factors on health preventive behaviors is shown. The attachment styles are of great importance due to the important role in interpersonal relations and the reaction of a person in stressful situations [8-13]. Attachment is a stable emotional relation and its characteristic is tendency to search and keeping closeness with a person, namely in stressful situations [14, 15]. According to Bowlby (1969), the people internalize the initial experiences with the care providers and form stable cognitive psychological

structures of the relations (Schema). These structures affect the image of a person of himself (self model) as care qualified person and deserving the aid and support of other (other model). The negative model of the self means that he is not entitled to care and is related to anxiety in interpersonal relations while the negative model of the other is defined by the lack of confidence of others and public avoidance in the relations. These cognitive structures or internal working models affect a person interaction with others and his interpretation of them during the life [16, 17]. Bowlby (1973, 1969) cited in Batman and Jasperson (2008) believed that during the stress, people rely on attachment relations by keeping the closeness with a person helping the helplessness management and it creates comfort. He believed that attachment is activated during the threat. In other words, disease is the threat, isolation and attachment activates attachment behavior. The adult patients show their attachment styles in therapy relations. Bartholomew believed that personal differences in attachment styles are applied in interpersonal relations including the relation between the patient and the caregiver. Therefore, attachment theory is a useful model to recognize the perception of the signs, medical care and interaction with the care givers [18]. The recent research about attachment is dedicated to the application of attachment theory in medical diseases. The attachment theory based on the fundamental assumptions can integrate the biological, mental and social variables and health and disease to determine the consistency with physiological disease [8]. The researches showed that insecure attachment style is related with the development of health problems via low participation in health protective behaviors [11, 19]. The researches showed that the people with insecure attachment style compared to the people with secure attachment styles little perform the health-related behaviors (e.g. sport, diet, stopping alcohol and smoking) [20]. In addition, Scarf et al. (2001), showed positive and significant relation between secure attachment style and health protective behaviors [21]. There is no study on the effect of socio-psychological factors on the cervix cancer screening barriers in Iran, the current study conducted with the aim of investigating the effect of attachment style on barriers of Pap smear screening test among women in BandarAbbas-Iran to provide background information for educational intervention of screening program and women education.

Methods

SAMPLE

The current analytic cross-sectional study conducted in 2011-2012 in BandarAbbas-Iran. The study population was all married women aged 20-65 referring to health centers of BandarAbbas-Iran. The inclusion criteria were as follow: Marriage, referring to the clinic to receive one of the services (pregnancy control, postnatal care, family control consulting, women disease, children vaccination). The exclusion criteria were as follow: Genital

cancer history or lack of tendency to participate in the study. According to the mentioned criteria, 681 women were selected by simple random sampling. For ethical issues, before the completion of the questionnaires, the participants completed written informed consent and were assured that their information will be confidential.

INSTRUMENTS AND MEASURES

1) Revised Adult Attachment Scale (Collins, 1996; Collins & Read, 1990).

The Revised Adult Attachment Scale (RAAS) (Collins & Read, 1990) is an 18-item measure of adult attachment dimensions. It consists of three subscales: Close, Depend and Anxiety. The Close subscale measures the level of comfort the individual feels with closeness and intimacy. The Depend subscale assesses if the individual feels they can depend on others to be available when needed. The Anxiety subscale measures the level of anxiety the person feels about being rejected or unloved. High scores on Close and Depend, and low scores on the Anxiety dimension, indicate a secure attachment style [22, 23]. Each item is scored on a 5-point Likert scale with some items being reverse scored. The RAAS has demonstrated adequate validity and reliability [22]. In the present investigation, the Cronbach alphas were .73 for Anxiety, .63 for Depend and .51 for Close, respectively.

2) Screening barriers questionnaire

The questionnaire of screening barriers of Pap smear is an 11-item questionnaire being designed for the evaluation of the barriers of Pap smear test. The items of the questions were derived from the questionnaire used to assess Pap test barriers by Hill and Gick [24]. Participants were asked to rate the 11 items, each regarding a potential barrier to cervical screening (e.g. too time-consuming, embarrassing), on a 7-point Likert scale ranging from "strongly disagree" to "strongly agree." A total Pap test barriers score was calculated by determining the mean Likert scale response. In the present study, the scale had excellent internal reliability ($\alpha = .83$). In data analysis, Pearson correlation coefficient, chi-square test and liner regression.

Results

In the present study 681 participants with age mean 33.96 completed the questionnaires by self-report method. 45.37% of them had academic education, 34.37% diploma and 20.26% had less than diploma degree. 60.64% of them were housewives and 39.36% were employed. Totally, 342 people (50.23%) had the history of Pap smear test.

Table I displays, secure attachment style had significantly negative relation with screening barriers and avoidant attachment style had positively significant relation with screening barriers. $P < 0.01$.

$F(3,680) = 11.13$ statistics imply regression equation to predict screening barriers based on attachment styles

Tab. I. Descriptive statistics and correlations of Attachment factors and screening barriers.

4	3	2	1	Variables
			1	1.Barriers
		1	-0.092**	Secure style.2
	1	0.331**	-0.025	Anxious style.3
1	-0.095**	-0.216**	0.211**	4.Avoidant style
15.64	17.27	20.56	36.48	Mean
4.49	4.20	3.63	14.34	SD

* 0.05 < p < 0.01 ** P

was significant (p = 0.001). Table II displays, avoidant attachment style is a significant predictive for screening barriers of Pap smear (p = 0.001).

Based on Table III, participation in Pap smear test was dependent upon the age of the participants (P = 0.001), the participation of the women was increased to its highest (58.8%) in 30-39 years and then decreased. The Participation in Pap smear test was dependent upon the residential area of the participants (p = 0.019). But not dependent on their job and education.

Discussion

The main aim of this study was to investigation of the role of attachment styles on screening barriers of cervix cancer. The results of the correlation between the varia-

bles showed that there was a significant negative relation between secure attachment style and screening barriers and there was a positive significant relation between insecure attachment styles (avoidant) with screening barriers. Attachment avoidance was the positive predictor for cervical screening barriers this result is in accordance to findings of other studies [25]. Among previous studies evaluating avoidant attachment style and its association with these relationship-oriented behaviors, the most consistent finding related to an association between the avoidant dimension of attachment and sexual behavior was an association with variables reflecting having had risky or casual partners [26, 27]. Both attachment dimensions have been linked to risky sexual behaviors such as increased sexual activity and a young age at first intercourse [27, 28]. This in turn may increase the risk of contracting the human papillomavirus (HPV), the sexually transmitted virus that causes cervical cancer [29]. Therefore, because of its association with cervical cancer risk-related behaviors (i.e. lack of screening and sexual activity; Health Canada, 2002), attachment insecurity may in turn be a risk factor for the development of cervical cancer. these results in combination with those from previous studies suggest that attachment style may be a useful framework for anticipating risk factors for a variety of common contributors to morbidity and mortality among adult women in this setting [30, 31]. Specially, an understanding of the influence of attachment style could be used to augment existing screening practices and allow practitioners or other team members (e.g., social workers, case managers, or therapists) to more quickly identify relationship-based risk factors for disease among persons with high levels of anxious attachment (e.g. sexual behaviors that place them at higher risk of STIs or unwanted pregnancy). It could also be used to help providers recognize when patients with high levels of avoidant attachment are using unhealthy strategies such as smoking to regulate negative emotions and/or are non-compliant with preventive/self care recommendations (e.g., when they are not using seatbelts or adhering to chronic disease treatment guide lines) [11, 32]. Maunder and Hunter [11, 19] proposed that attachment insecurity is a risk factor for inadequate participation in health-protective behaviors, but the mechanisms underlying this relationship

Tab. II. Linear regression of attachment dimensions on Pap test barriers.

p	t	R ²	R	β	predictor variable
0.202	-1.278	0.04	0.21	-0.052	Secure
0.783	0.275			0.011	Attachment Anxious
0.001	5.236			0.201	Attachment Avoidant

Tab. III. The relation between demographic characteristics and Participating in Pap smear test among women.

p-value	Non Participated (n=339)	Participated (n=342)	Variable
0.061	11(73.3%)	4(26.7%)	Education level Illiterate Elementary Guidance school Diploma University
	28(62.2%)	17(37.8%)	
	44(56.4%)	34(43.6%)	
	111(74.4%)	123(52.6%)	
	145(46.9%)	164(53.1%)	
0.433	128(47.8%)	140(52.2%)	Job Employee Unemployed
	211(51.1%)	202(48.9%)	
0.019**	301(48.2%)	324(51.8%)	Residence City City zone Village
	13(68.4%)	6(31.6%)	
	25(67.6%)	121(32.4%)	
0.001**	155(60.5%)	101(39.5%)	Age 21-29 30-39 40-49 50-59
	110(41.2%)	157(58.8%)	
	48(45.3%)	58(54.7%)	
	26(50.0%)	26(50.0%)	

Data were presented as frequencies .(%) p-values marked with** were performed using Pearson Chi-square test.

remain speculative [11-14]. One possibility is that because attachment security is associated with trust in others and suitable help-seeking behaviors [34]. Individuals who are securely attached also seek health care when appropriate. Additionally, attachment security has been linked to the ability to employ effective coping mechanisms [34,35], which in turn could also be applied to cervical screening. Compared to those who are insecurely attached, securely attached individuals are more likely to perceive threats as challenges [36] and, in turn, effectively cope with such threats. It is possible that cervical screening may be perceived as a threat because of the stressful aspects of screening (e.g. the discomfort of the exam and waiting for test results), and therefore, attachment insecurity could be a hindrance in coping with these stressors. In order to clarify the association between attachment and cervical screening, future research should consider exploring potential moderators and mediators of the association, such as coping mechanisms and threat appraisals. Other findings of the study are the significant association between the age and residential area by doing Pap smear test. Similar to the findings of other studies, the participation of the women was increased to its high-

est (58.8%) in 30-39 years and then decreased [37-39]. The relationship between screening for cervical cancer and age, high educational level, and residential area suggest that these groups are more likely to participate in cervical cancer screening and this is consistent with previous studies [37, 40]. This study had a number of limitations. First conclusions from self-report data also demand caution. It is possible that the subjects gave non-exact responses in some cases. In addition, the cross-sectional study design precluded assessment of temporal relationship among variables. Finally selecting participants from health centers decreased the potential of generalizing the results to other populations. The results of the study are applied in the development of the interventions via considering the processes predicting the screening behaviors.

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