



TEMPORAL DIMENSIONS AND SOCIAL PROBLEM SOLVING

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Abstract

In this study we were primarily interested in identifying the extent to which time perspective and perceived control over personal time contributed to the way individuals solve their social problems. The research sample was composed of 160 participants from different educational and socioeconomic levels. For the assessment of the variables involved we used the following instruments: Time Perspective Inventory, Perceived Control over Personal Time (subscale derived from the Time Management Inventory), Social Problem Inventory and Survey of Life Experiences (14 items that address social problems). Our results revealed that the problem orientation component of social problem solving is an important factor for the individual's responsibility in the occurrence of social problems. This factor was shown to be highly influenced by the interaction of three temporal dimensions: (a) negative view of the past; (b) future orientation; and (c) perceived control over personal time.

Keywords: time perspective, perceived control personal over personal time, social problems, problem orientation, problem solving skills

Introduction

Personal time perspective represents an important psychological element that allows the individual to perceive the world and his/her life in a coherent and continuous manner. It is considered to be a fundamental process that is involved in storing learned experiences and in projecting into the future while experiencing present events. Thus, according to several authors, this

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aspect of the human psyche exerts one of the most important influences on all aspects of human behavior (Boniwell, 2005; Zimbardo & Boyd, 1999).

Zimbardo & Boyd (1999) identified five temporal perspectives that an individual may be predominantly focused on: (a) negative view of the past – implies a focalization on negative events from the personal past; (b) positive view of the past – implies a focalization on past relationships and a desire to live in the past; (c) fatalistic view of the present – reflects a negative and hopeless view with regard to the present conditions of the individual's personal life and an expectation for constant failure; (d) hedonistic view of the present – reflects a self-indulging attitude towards present events with no regard to possible negative outcomes and a reluctance to postpone satisfaction; and (e) future orientation – implies setting personal goals and preparing for the future on a behavioral and instrumental level. According to the authors every person is predominantly oriented on one of these time perspectives; however, an excessive orientation on any of them may lead to dysfunction and perhaps psychopathology.

In one study Roşeanu & Răşcanu (2006) showed that specific patterns of association exist among personality traits and personal time perspective. It was reported that focus on the future was associated with an active effort to adapt to the norms of social groups and to contribute to their well being, whereas a negative attitude regarding the past and a hedonic or fatalist view of the present were associated with lack of adaptation to the norms of the social group and disengagement from it (I.E., from its norms and practices). In another study Roşeanu & Marian (2006) point out that personal time perspective exerts a significant influence on people's tendency to procrastinate.

Perceived control over the environment is a very important element of human cognition that influences the way in which the person is able to adapt to her environment (Staudinger Fleeson & Baltes, 1999). In the above mentioned study by Roşeanu & Răşcanu (2006) perceived control over one's personal use of time emerged as a distinct factor of overall perception of environmental controllability. Hoff Macan (1994) sustains that perceived control over personal time is one of the most important temporal dimensions responsible for the wellbeing of the individual. In a study by Roşeanu (2010) it was shown that the manner in which time is perceived as either being controllable or uncontrollable by personal effort influences people's general sense of coherence; thus, it was

concluded that a proper sense of coherence is given in part by the way in which people control and use their time.

According to (D’Zurilla & Nezu, 1992; *apud* Corcoran & Fischer, 2000) social problem solving implies a complex cognitive-affective-behavioral process that consists of a number of different components. These may include some general motivational variables but also a set of specific skills. Thus, the authors believe that efficient social problem solving is a matter of problem orientation and problem solving skills. D’Zurilla & Nezu (*apud* Corcoran & Fischer, 2000) further explain that problem orientation implies cognition, emotion and behavior; and problem solving skills consists of problem definition and formulation, generation of alternatives, decision making, solution implementation and verification.

Bingaam & Power (2002) sustain that problem solving represents a general coping strategy that allows the individual to generate, select and implement efficient behaviors that will increase his/hers level of general wellbeing. Several studies (as cited by Bingaam & Power, 2002) have shown that the above mentioned components of social problem solving are involved in the experience of negative emotions and psychological distress. Furthermore, it was shown that the efficiency of the problem resolution acts as a buffer between stress and its effects on the health of the individual.

In conclusion, we consider that the social problem orientation and skills that an individual has might be an important factor in determining the occurrence of some personal social problems. Furthermore, we consider that the temporal dimensions, time perspective and perceived control over personal time, may be of importance for the way in which an individual is oriented towards social problems and the manner in which he or she implements solutions. We aim to investigate these assumptions in this study.

Objective

The objective of the study was to investigate the relationship between time perspective and perceived control over personal time, as temporal dimensions, and social problem solving. We were interested to identify which of the time dimensions were important factors for the social problem solving elements and also to identify which of these elements were of importance for the person’s responsibility in the occurrence of actual social problems.

Method

Participants

In this study a number of 76 males (mean age 32.91 years; $\sigma = 11.85$) and 84 (mean age 30.42 years; $\sigma = 11.72$) females participated voluntarily. The sample was composed of persons of different educational and socioeconomic level; full anonymity was assured to the participants.

Instruments

Personal time perspective was measured with the *Time Perspective Inventory* (Zimbardo & Boyd, 1999). The inventory consists of 56 items for which the respondent indicates on a 5 point Likert scale (from 1: strongly disagree, to 5: strongly agree) the degree to which each item is characteristic for them. For this study we used an adapted version of the Time Perspective Inventory for the Romanian population (Roşeanu & Răşcanu, 2007). This instrument measures time perspectives across five dimensions: (a) negative view of the past ($\alpha^1 = .815$); (b) fatalistic view of the present ($\alpha = .759$); (c) hedonistic view of the present ($\alpha = .722$); (d) future orientation ($\alpha = .793$); and (e) positive view of the past ($\alpha = .537$).

The perceived control over personal time was measured by the Perceived Control over Time subscale ($\alpha = .677$), derived from the *Time Management Inventory* (Hoff Macan, 1994). It consists of 13 items for which the respondent indicates on a 5 point Likert scale (from 1: very rarely, to 5: very often) the degree to which each item is characteristic for them.

The social problem solving components were assessed with the *Social Problem Solving Inventory* (D'Zurilla & Nezu, 1992; *apud* Corcoran & Fischer, 2000). The inventory consists of 70 items for which the respondent indicates on a 5 point Likert scale (from 0: not at all true of me, to 5: extremely true of me) the degree to which the statement in each item is true for him/her. The two major subscales of the instrument are: problem orientation ($\alpha = .909$) and problem solving skills ($\alpha = .895$). These in turn are composed of several subscales: (a) problem orientation – cognitive ($\alpha = .638$); (b) problem orientation – emotional ($\alpha = .855$); (c) problem orientation – behavioral ($\alpha =$

¹ The alpha Cronbach coefficients reported in this article were measured by us for each subscale of each instrument.

.806); (d) problem solving skills – defining the problem ($\alpha = .842$); (e) problem solving skills – generation of alternatives ($\alpha = .810$); (f) problem solving skills – decision making ($\alpha = .698$); (g) problem solving skills – solution implementation ($\alpha = .740$).

The actual occurrence of social problems was identified by using 14 items (3, 4, 5, 6, 7, 11, 14, 19, 25, 27, 31, 32, 37 and 39) from the *Survey of Life Experiences* (Kohn & Macdonald, 1992; Oprea, Marian, Filimon, & Banciu, 2011). We used only these items since all of them referred to social problems that individuals may encounter on a daily basis. The calculated alpha Cronbach coefficient for this composed scale was .824, which indicates good internal consistency. The full survey consists of 41 items, describing experiences which many people have some time or other. For each such experience the respondent indicates on a 4 point Likert scale (from 1: not at all part of my life, to 4: very much part of my life) how much it has been a part of their life over the past month.

Procedure

The participants were instructed to respond to the inventories and survey in accordance with the criteria of administration of each instrument. The participants were instructed to respond as sincerely as possible and it was made clear to them that there are no “right” or “wrong” answers. The instruments were administered in groups in paper-pencil format. The data was analyzed with SPSS version 15.

Results and discussion

The main objective of this study was to investigate the relationship between social problem solving and some distinct temporal dimensions. Specifically we were interested to identify whether time perspective and perceived control over personal time were of importance for people’s problem solving strategies within the social domain.

The first step of the analysis was to identify those time perspective factors that associate with social problem solving abilities. Also we measured the degree of association between the social problem solving variables and perceived control over personal time. The obtained results are presented in table 1.

Our results show that not all the temporal dimensions show significant relationships with the problem solving factors. The negative view of the past is significantly associated (negatively) with two of the problem orientation factors (cognitive and emotional) and with none of the problem solving skills ones. It seems that people with negative views of their personal past are less able to orient themselves emotionally and cognitively towards a social problem. This is probably due to some negative experiences in their past which induced a certain attitude towards these kinds of problems. Perhaps these experiences conditioned them to avoid orienting oneself (both cognitively and emotionally) towards social problems and react to them in a well trained but detached way (as learned previously from some model figure). This temporal perspective has no linear relationship with the other problem solving factors. It seems that implementation of the solutions to the social problems are not affected by this type of time perspective.

Table 1. Correlations between time dimensions and social problem solving factors

		past - negative	present - hedonistic	present - fatalistic	future	past - positive	time - perceived control
problem orientation – cognitive	r	-.324*	-.042	-.310*	.363*	-.009	.416*
problem orientation – emotional	r	-.281*	-.192	-.258*	.313*	-.042	.412*
problem orientation – behavioral	r	-.203	-.146	-.264*	.488*	.042	.523*
problem solving skills – defining the problem	r	.016	.037	-.210	.330*	.017	.272*
problem solving skills – generation of alternatives	r	-.001	.098	-.206	.334*	.065	.256
problem solving skills – decision making	r	-.112	-.062	-.221	.550*	-.025	.490*
problem solving skills – solution implementation	r	-.094	.035	-.268*	.478*	.084	.444*

* $p < .00064$ [this value was obtained by applying the Bonferroni correction for correlations (Garson, 2011)]

The hedonistic view of the present does not show any significant linear associations with the social problem solving factors. Perhaps those who display such a view of the present do not concern themselves with social problems. It may be possible that they are so engulfed in living in the present and serving only their own purpose that they are inattentive to the social problems around them. Thus, they don't perceive a problem and so they do not act to resolve it. Those with a fatalistic view of the present however, seem to perceive social problems frequently. This time perspective showed significant correlations with all the problem orientation factors and one problem solving skills factor (solution implementation). All these associations were negative. A fatalistic view of the present implies less effective social problem solving. This result may suggest that the constant unsatisfying view of the experienced present events disables people's capacity to orient themselves towards social problems. They may consider that investing their energy in proper problem solution (by orienting themselves towards the problem) is not worth doing since the outcome will most likely be a negative one. They view all outcomes as ultimately negative. The lack of association between the three problem solving skills factors (problem definition, generating alternative solutions and decision making) and the fatalistic view of the present indicates that individuals with this type of time perspective do have the capacity to solve such problems, however they do not completely involve themselves in the resolution process (by properly orienting themselves towards the problem) probably because they expect a negative outcome. The negative association between solution implementation (the fourth element of problem solving skills factor) and fatalistic view of the present represents another argument for sustaining the above mentioned mechanism. Thus, even if solutions to the social problems are found they may not be put into practice if the expected outcome is a negative one.

Future time perspective shows a positive association with all the elements of both the social problem solving factors. This suggests that people that constantly think of their future and are strongly oriented towards obtaining their goals are very concerned with resolving their social problems. Perhaps they perceive the individuals around them as means of achieving their goals thus they are constantly interested in keeping good relationships with others. This implies that they are always attentive to social problems that may arise and are actively involved in resolving them. The very high correlation coefficients

of future time perspective with the behavioral problem orientation, decision making and solution implementation further sustains this idea.

The past positive time perspective didn't show any significant associations with any of the problem solving factors. This result is inconclusive however due to the low internal consistency of the subscale used to measure this time perspective.

Perceived control over personal time was positively associated with all the social problem solving factors with the exception of the generating alternatives element. It seems that individuals that control their time efficiently are also efficient in managing their social problems. It may be possible that these individuals view and manage both time and social relationships as resources. Thus, it seems plausible that the efficiency in managing time and social relationships may be explained by a general ability or habit of managing resources; or a general perceived control over the environment. The strong relationships between these variables seem to support this idea.

The next step of our analysis was to explore the relationship between the social problem solving factors and the actual social problems that individuals are frequently confronted with. The obtained results are presented in table 2.

Table 2. Correlations between social problem solving factors and actual reported social problems

		social problems
problem orientation – cognitive	r	-.342*
problem orientation – emotional	r	-.326*
problem orientation – behavioral	r	-.286*
problem solving skills – defining the problem	r	-.011
problem solving skills – generation of alternatives	r	-.027
problem solving skills – decision making	r	-.149
problem solving skills – solution implementation	r	-.136

* $p < .0018$ [this value was obtained by applying the Bonferroni correction for correlations (Garson, 2011)]

The correlation analysis reveals that only the problem orientation factors are associated with the actual social problems that individual encounter. All three problem orientation factors show negative correlations with the reported social problems. Thus, the more people are oriented towards solving their social problems (at all three levels, cognitive, emotional and behavioral)

the less often they encounter these types of problems. This result is not surprising since a true orientation (on all these levels) towards resolving such problems will yield in most cases positive outcomes. Thus, individuals who are problem oriented will develop skills that assist them in quickly resolving the problem or learn how to identify them and prevent their occurrence. Furthermore, the lack of linear associations between the problem solving skills and reported social problems indicates that it is not the actual problem solving process that prevents the appearance of social problems (which are most often beyond the control of the individual) but the attitude towards these types of problems that are important.

The third step of our investigation implied running a correlation analysis between the time perspective dimensions and the reported social problems. The obtained results are presented in table 3.

Table 3. Correlations between time dimensions and actual reported social problems

		social problems
past - negative	r	.396*
present - hedonistic	r	.028
present - fatalistic	r	.268*
future	r	-.131
past - positive	r	-.032
time - perceived control	r	-.345*

* $p < .0024$ [this value was obtained by applying the Bonferroni correction for correlations (Garson, 2011)]

Only some of those time perspective dimensions that were significantly correlated with the social problem solving factors are associated with the actual social problems that individuals encounter. The negative view of the past and fatalistic view of the present are both positively correlated with social problems, indicating that people with these types of time perspectives encounter more social problems. It is not surprising that individuals who are stuck on negative past experiences and those who constantly view their present ones as being without hope encounter more social problems. On the one hand they may not be motivated to try and solve such problems (because they learned that their actions never yield positive results) and on the other they may cause these problems by constantly manifesting their negative views around other people.

Perceived control over personal time is negatively associated with the occurrence of social problems. Again, this result is not surprising since individuals who are able to manage their time efficiently are most likely to be able to manage social problems. Thus this general management (control) capacity may be the factor that is responsible for this association.

We observed that there was no association between future time perspective and the occurrence of social problems even though this time perspective did have strong significant correlations with the social problem solving dimensions. It may be possible that since those individuals who are future oriented view others as resources in obtaining their goals they might sometimes openly manifest this attitude which may generate social problems. Thus, even though these individuals are oriented towards resolving social problems and do have the skills necessary for it, their general attitude towards others may cause problems.

The final step of our study was to identify the contribution of each significant temporal dimension to the problem orientation element of the social problem solving capacity. We focused our attention only on this social problem solving element due to the fact that only this element showed significant correlations with the actual reported social problems. Thus, we consider that only this element is of importance for the personal responsibility that the individual has with regard to the occurrence of social problems. We consider that this element is influenced by the temporal dimensions and so we are interested in identifying the individual contribution of each relevant temporal dimension to this problem solving element. For this purpose we used hierarchical regression analysis. The obtained results indicate that all the temporal dimensions should be included in the regression equation (table 4).

Since all the components of the problem orientation factor showed significant correlations with the actual reported social problems and also with all the relevant time dimension components (with one exception²) we used a composite score to represent the problem orientation variable in the regression equation. We calculated this composite score to represent the problem orientation variable based on the scores obtained for the three

² The negative view of the past did not correlate significantly with the behavioral component of the problem orientation factor. However this correlation was considered to be non-significant only after the use of the Bonferroni correction. Thus, we still included the above mentioned time perspective in the regression analysis.

problem orientation components (cognitive, emotional and behavioral). This procedure is in accordance with the scoring suggested by the authors of the Social problem solving inventory (*apud* Corcoran & Fischer, 2000).

Table 4. Model Summary for the hierarchical regression equation for problem orientation

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.294 ^a	.087	.081	16.80	.087	14.969	1	158	.000
2	.339 ^b	.115	.103	16.59	.028	4.996	1	157	.027
3	.559 ^c	.313	.300	14.66	.198	45.014	1	156	.000
4	.599 ^d	.358	.342	14.22	.045	10.986	1	155	.001

a. Predictors: (Constant), negative view of the past

b. Predictors: (Constant), negative view of the past, fatalistic view of the present

c. Predictors: (Constant), negative view of the past, fatalistic view of the present, future orientation

d. Predictors: (Constant), negative view of the past, fatalistic view of the present, future orientation, perceived control over the use of personal time

Table 5. Coefficients for the regression model for problem orientation

Model nr. 2	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
(Constant)	41.773	11.345		3.682	.000			
negative view of the past	-.490	.169	-.232	-2.903	.004	-.294	-.227	-.187
fatalistic view of the present	-.169	.214	-.064	-.792	.430	-.303	-.063	-.051
future orientation	.877	.204	.326	4.293	.000	.427	.326	.276
perceived control over the use of personal time	1.032	.311	.265	3.314	.001	.498	.257	.213

The coefficients table offers a slightly different view however (table 5). It seems that the fatalistic view of the present is not as important for the problem orientation factor as previously considered. This temporal dimension becomes non-significant if the other time dimensions are held constant. Thus,

only the negative view of the past, future orientation and perceived control over personal time are of importance for problem orientation. These results suggest that the view of the present one has becomes important for the way he or she orients themselves towards social problems only in combination with the way they view their past and future (and probably the degree of control they perceive over their personal time). This might be explained by the fact that present views are always modeled by learned experiences in the past and expectations regarding future outcomes.

The negative view of the past has a common variance of 3% with problem orientation, the future time perspective shares 5% of variation with this variable and perceived control over the use of personal time has 8% of common variation with it. Clearly, taken individually each time dimension has low to moderate influence on problem orientation. The common variance of all the time dimensions with problem orientation is 34.3%, which indicates a very high influence. This shows that the interactions among the different temporal dimensions are more important for problem orientation than each individual dimension. Thus, if one aims at changing someone's problem orientation style through psychological intervention at the temporal level, it is important that they target all the relevant time dimensions so that their interaction would be influenced.

Conclusions

Our study identified the complex relationships between the temporal dimensions and social problem solving. It addressed not only the social problem solving capacity of the individual but also the occurrence of actual reported social problems. Thus, we identified the relevant time factors that we consider to have a significant impact on social problem solving, and also we identified on which of the problem solving factors these time dimensions exert their influence. Furthermore, we showed that the problem orientation factor is related to the occurrence of actual social problems. It seems that this component of social problem solving is an important factor for the individual's responsibility in the occurrence of social problems.

Problem orientation seems to be greatly influenced by the interaction of three temporal dimensions: (a) negative view of the past; (b) future orientation; and (c) perceived control over personal time. Thus, all of them have to be

addressed in psychological intervention if one aims at changing the person's problem orientation style.

These results may be of importance for practitioners in a variety of fields. For example clinicians and psychotherapists may use them to establish goals and strategies for helping individuals solve social problems. Also, psychologist working in organizations with groups may use these results to improve group dynamics.

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