We examined perceptions of mood based on seasonal changes and activity levels. Overall, those shown engaging in active pastimes were rated as being more energetic and happier than if engaged in non-active pastimes. When a person was shown in a winter setting, they were perceived as being happier and enjoying the activity more if engaged in active pastimes as opposed to non-active ones. The opposite was true for those engaged in activities depicted during summertime.

- First, we found that overall people shown engaging in active pastimes were rated as being happier and more energetic than those engaged in non-active pastimes.
- This finding makes sense because previous work has demonstrated how physical activity and exercise increase positive affect (Hogan et al., 2013).
- However, we also demonstrated that the moods of people shown engaging in pastimes requiring different activity levels were dependent upon the seasonal setting depicted.
- For summer seasonal settings, those shown engaging in non-active pastimes were rated as being happier and enjoying the activity more than when engaged in active pastimes. However, for winter seasonal settings, the opposite was true, those engaging in active pastimes were rated as happier and enjoying the activity more than those engaging in non-active activities.
- Perhaps because decreased mood occurs during winter months due to such factors as reduced sunlight exposure and lower vitamin D3 levels (Lansdowne & Provost, 1998), participants felt that those engaging in active winter activities were compensating for their drop in mood by trying to elevate their mood by being active.
- Pinchasov, Shurgaja, Grischin, and Putilov (2000) found that physical activity and exercise are an effective non-pharmacological treatment for individuals who experience winter depression.
- On the other hand, summertime is associated with elevated moods in general, so there is no need to try to increase one’s mood with physical activity.
- In fact, some studies suggest that higher temperatures and sunshine relate for more relaxing times as seen when traveling (Ettema et al., 2017).

**Methods**

Participants

There were a total of 51 participants (47 women and 4 men) in this study. Participants were undergraduate students solicited from the Psychology Department Participant Pool at Albright College and were acquaintances of the investigators recruited via email messages alerting them of an online anonymous survey. The mean age of participants was 19.63 (SD = 1.25, range 18-24).

Procedure

This study was administered as an online anonymous survey. Participants were divided into two groups and viewed pictures of people in either a summer setting or winter setting. For each seasonal setting, the pictures showed a person engaging in an active pastime and a non-active pastime. After viewing each picture, the participants were asked to make ratings on a 10-point scale to assess how happy the person appears to be, how much the person is enjoying the activity, and how energetic the person appears to be.

**References**


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**Effects of Seasonal Changes and Activity Levels on the Perception of Mood**

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**Abstract**

We examined perceptions of mood based on seasonal changes and activity levels. Overall, those shown engaging in active pastimes were rated as being more energetic and happier than if engaged in non-active pastimes. When a person was shown in a winter setting, they were perceived as being happier and enjoying the activity more if engaged in active pastimes as opposed to non-active ones. The opposite was true for those engaged in activities depicted during summertime.

- Warm weather tends to have a positive impact on individuals’ moods (Keller et al., 2005).
- It has been shown that in a sample of adolescent girls, seasonal variations of depressive symptoms and their depressive symptoms were much greater during the cold, winter months than the warm, summer months (Kristjansdottir et al., 2013).
- Giacobbi, Hausenblas, and Frye (2005) studied the relationship between levels of exercise and mood and found that with increased levels of exercise there is a drastic increase in positive mood.
- Even a quick 10 to 30-minute anaerobic exercise each day is enough to positively increase mood (Chan et al., 2017).
- Seasonal changes also seem to impact activity levels. Compared to a winter day, the average amount of time walking outside for both men and women tends to increase during the summer (Klenk et al., 2012).
- We hypothesized that participants would rate people seen in the summer seasonal setting (e.g., swimming, reading a book outside) as being happier, more energetic, and enjoying the activity more than people in the winter seasonal setting (e.g., skiing, reading a book inside).
- We also hypothesized that participants would rate people seen participating in the active activities, (e.g., swimming and skiing), as happier, more energetic, and enjoying the activity more than the people engaging in the non-active activity, (e.g., reading a book), however we anticipated that perception of activity level may be dependent upon the season being shown.

**Method**

Participants

There were a total of 51 participants (47 women and 4 men) in this study. Participants were undergraduate students solicited from the Psychology Department Participant Pool at Albright College and were acquaintances of the investigators recruited via email messages alerting them of an online anonymous survey. The mean age of participants was 19.63 (SD = 1.25, range 18-24).

**Results**

Figure 1. There was a significant interaction between the activity level of the pastime and season depicted on the participant perceived happiness of the person engaging in the activity shown, F(1,39) = 33.07, p < .001, ηp2 = .52. For summer settings, people were perceived as being happier when engaged in non-active pastimes as compared to active ones, F(1,39) = 5.11, p < .05. However, for winter settings, people were perceived as being happier engaging in active pastimes than non-active ones, F(1,39) = 5.59, p < .05.

Figure 2. There was a significant interaction between the activity level of the pastime and season depicted on the participant perceived enjoyment of the person engaging in the activity shown, F(1,39) = 26.72, p < .001, ηp2 = .43. For summer settings, people were perceived as enjoying the non-active pastimes more than the active pastimes, F(1,39) = 8.81, p < .001. For winter settings, people were perceived as enjoying the pastime more if it required activity than had not, F(1,39) = 14.9, p < .002.

Figure 3. There was a main effect for activity level of the pastime in relation to how energetic the people appeared in the pictures, F(1,39) = 10.87, p < .001, ηp2 = .26. Overall, those engaged in active pastimes were perceived as being more energetic than those engaged in non-active pastimes.

**Discussion**

- Pinchasov, Shurgaja, Grischin, and Putilov (2000) found that physical activity and exercise are an effective non-pharmacological treatment for individuals who experience winter depression.
- On the other hand, summertime is associated with elevated moods in general, so there is no need to try to increase one’s mood with physical activity.
- In fact, some studies suggest that higher temperatures and sunshine relate for more relaxing times as seen when traveling (Ettema et al., 2017).

**References**

